

MOTOR AGE

A Chilton Class Journal Publication
Published Weekly August 30, 1928

Beat the Prospect to It

You know that it is a good rule of salesmanship to "know what they want *first*."

Favorable personal experience, powerful Timken advertising, and *other salesmen* have educated people to ask, "Has this chassis Timken Bearings?"

So *tell* them of the Timken Bearings. It adds force to everything else you say, because Timkens are an accepted indication of continued, fine, attention-free performance.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

The technical reasons for Timken durability are Timken tapered construction, Timken *POSITIVELY ALIGNED ROLLS*, and Timken-made electric steel. "More than anti-friction bearings" Timkens are *complete* protection against the wear of side-thrust, shock, speed and torque.

TIMKEN *Tapered Roller* BEARINGS

WITH THESE NEW 1929 MODELS CENTURY VALUES REMAIN SUPREME

NO longer is there uncertainty as to what the year will offer in advancement of motor car style and value. You have seen the best the industry will offer and you can prove for yourself that the Century's best is the year's best,—that the new 1929 Century Six and Eight advance Hupmobile to a higher and stronger position than ever. Shimmering, glistening newness—backed by the Century's finest craftsmanship in design and construction—at prices which make higher price a folly. These are the great advantages which keep Hupmobile the sales leader in the field of finest motor cars.

HUPP MOTOR CAR CORPORATION
DETROIT, MICHIGAN

NEW 1929 HUPMOBILE
CENTURY
SIX & EIGHT

Compared with every rival in the fine car field, New Century models reveal large advantages in price, value, beauty and performance. They are the only completely tailored-metal motor cars.

**Compare Them
Today**

TO DEALERS

Contrast the new 1929 Century Hupmobiles with all others recently announced. You will be quickly convinced that the Hupmobile franchise now offers greater advantages than ever before. Wire or write for details of our contract.

For the Business Man Alive to Opportunity

Armatures—thousands of them per day
—are brought into your shop and other
shops, for replacement.

You make a profit by selling new armatures to replace the old ones—true!

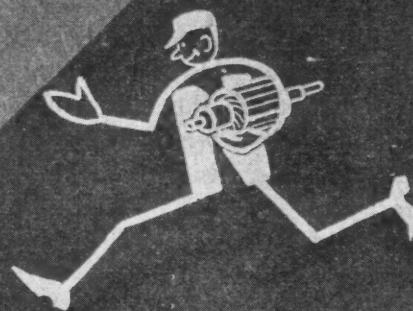
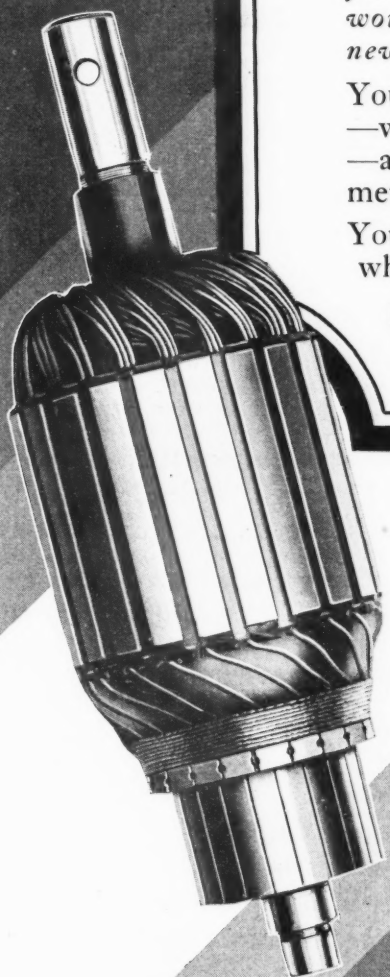
But by dealing with Neil's, you double your profit—and you get a perfect rewind armature that's just as good as new.

You send the old, burned out core to us
—we send you the rewind armature
—and immediate service is part of our
method of doing business.

You may deal direct—or through your
wholesaler.

NEIL ARMATURE CO.

Canton, Ohio



Neil's

Rewound Armatures

Right Now—
GRAIGRENE
 [PRONOUNCED GREY-GREEN]
 Is "Hot"

—and the Colder the Weather
 the Greater Your Profits!

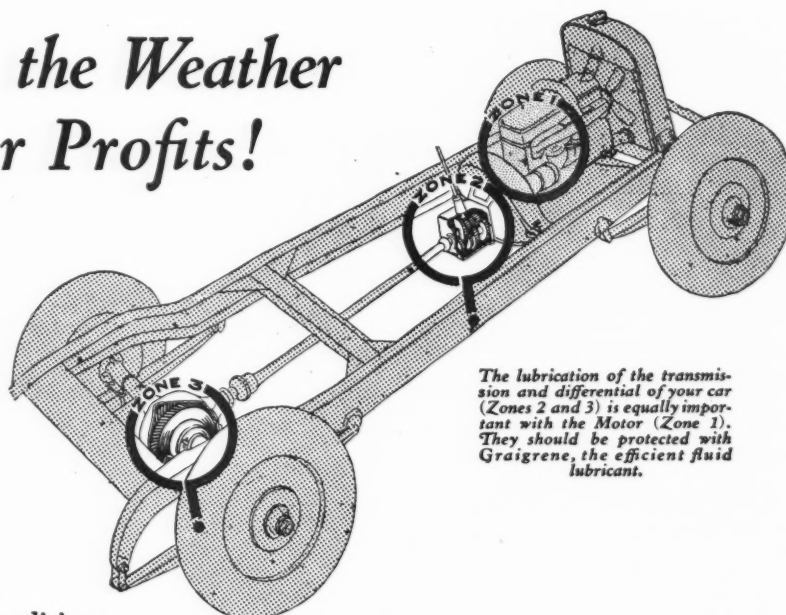
Graigrene is the *real* "hot shot" for cold weather profits! And *now* is the time to start thinking about where *your* cold weather profits are going to come from.

Graigrene is your best bet—because Graigrene is the best bet for cold weather lubrication of transmissions and differentials.

A lubricant which flows freely, maintains its body despite weather conditions, and protects every gear with a persistent film *all the time* is what automotive engineers prescribe. And in *prescribing* a fluid lubricant of this kind they're *describing* Graigrene!

Motorists, too, realize more than ever before the importance of proper gear protection through the cold weather months. Most of them have had experience with the heavy greases which pack their gear housings, channel and plaster at the slightest chill, and cause excessive repair expense by causing excessive friction.

That's why so many of them are turning to Graigrene! Graigrene will have more



The lubrication of the transmission and differential of your car (Zones 2 and 3) is equally important with the Motor (Zone 1). They should be protected with Graigrene, the efficient fluid lubricant.

"converts" this coming season than ever before—because Graigrene's educational advertising campaign is bearing fruit.

Right now—Graigrene is "hot"—and it's going to stay "hot"! A transmission and differential lubricant which delivers 7% more power, reduces friction load 26%, and increases gasoline mileage 5.55% per gallon is bound to go big. And profits for you are bound to go big, too. Don't wait for Opportunity to knock down your door—step up and shake hands with it by getting the Graigrene sales plan right now! Write us at once—or ask your local oil jobber.



Manufactured by
Viscosity Oil Company

Established 1894

W. D. SIMMONS, President

Central Manufacturing District, CHICAGO

Phone Yards 7196



MOTOR AGE

Vol. LIV

Reg. U. S. Pat. Off.
Established 1899

No. 9

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JOHN C. GOURLIE, News Editor SHERMAN SWIFT, Assistant Editor
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Entered as Second Class Matter, June 2, 1927, at the Post Office at Philadelphia,
Pa., under Act of March 2, 1879.

Gets the job out today!!

Advance Packings enable garages, service stations and repair shops to give real service. Cut the gasket for any car. No time lost—obsolescence banished.

TENAX

unexcelled for oil and
HEAT gaskets. "Original
Blue Sheet."

Thousands of repair men will use only TENAX compressed asbestos sheet packing—FOR USE WHERE THERE IS HEAT—no matter how intense. Makes a quality job that stands up.

TANPAC

for intake and oil conditions "Sheet Packing."

For use where water, oil, gasoline and grease are encountered and where there is NO HEAT. Withstands heavy pressure and temperature up to 300°. Light in weight—and "THE TOUGHEST OF THE TOUGH."

We offered the first compressed asbestos sheet in the United States more than 34 years ago and for 20 years Advance Products have been the choice of all for automotive replacement work. 25 uses on every car—Order today from your jobber, or write us direct.

ADVANCE PACKING & SUPPLY CO.

808 W. Washington Blvd.

Chicago, Ill.

NEW BALLOON TIRE TESTER TANK

(Patented Aug. 26, 1903)



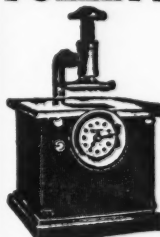
Needed in every service station and repair shop. Thousands now in daily use. Saves time! Makes profits! Adjustable rod supports tube. Tank is made of sheet steel and galvanized after formation.

Write for prices.

Size 31 in. long 8 1/4 in. wide 8 1/4 in. deep
DOVER STAMPING & MFG. CO., Cambridge A, Mass.

FOLLETT'S NEW MODEL TIME STAMP

accounts for every labor minute



Prints the year, month, day, hour, minute, A.M. or P.M. at the exact moment the plunger is pressed—like this, for example:

NOV 19 1920 4 31 PM

Tells when a job is started—and when it is finished. There can be no dispute over the time charge.

Absolutely automatic — except for winding. Every machine guaranteed.

Follett Time Recording Co., 217 High Street, Newark, N.J.

"Established Since 1904"

MOTOR AGE

The Oldest Weekly Automotive Retail Publication —The “Youngest” Editorially

Motor Age is 29 years old.

Because for 29 years it has successfully supplied the weekly need of a representative group of active readers, for news of the industry, feature articles, shop information, car and accessory descriptions, specifications, personal questions and answers, etc.

Its editors have never grown old. They are abreast of the times—often ahead of the daily newspapers with information to the trade.

Motor Age is the news publication of the industry. It gets there every week—and *it gets there!*



Weekly Readers Are Weekly Buyers

On the track and on the books, the **NEW STUDEBAKERS** *smash their own records!*

**Studebaker President
Eight—30,000 miles in
26,326 minutes!** (Total elapsed
time)

Four stock President Eights—2 roadsters and 2 sedans—picked at random from Studebaker's assembly line by A. A. A. officials rolled up three years' mileage in 19 days and 18 nights at Atlantic City. The roadsters averaged 68.37 and 68.36 miles per hour, the sedans 64.15 and 63.99 respectively. What a telling, *selling* proof of stamina.

August—Twelve consecutive months of sales increases!

Studebaker showed substantial sales *gains* every month over the same month a year before—even during the months when the industry as a whole showed a *loss*. Smart, modern good looks—sound engineering, and *proven* performance are making sales records for Studebaker dealers!

**Erskine Six Sales first 6 months of 1928
more than all of last year!**

Studebaker's four great new cars—The President Straight Eight, Commander, Dictator and Erskine Six, from \$835 to \$2485—provide the right car for the purse and preference of every prospect. If you want to make real money, find out about the Studebaker-Erskine franchise in your community NOW!

New Contract *for towns and villages*

For small communities Studebaker offers an unusually profitable contract. Hardly any capital is necessary. No shop need be operated. No used cars need be handled. No commitments need be made to purchase any particular number of cars. You may confine your selling effort to the opening wedge of the line—The Erskine Six at \$835 f. o. b. factory. Maintaining an Erskine demonstrator entitles you to sell all other Studebaker models—not only Commander, Dictator and President Straight Eight, but a profitable and popular line of commercial cars as well. Mail the coupon TODAY, or write direct to Dept. 51 for information.

THE STUDEBAKER CORPORATION OF AMERICA
Dept. 51, SOUTH BEND, INDIANA

Please send me full information on the Studebaker-Erskine franchise.

Name

Street Address.....

City and State.....

My present business (if selling cars now, state make).....

Confidence and Respect

Above and beyond all other considerations is the fact that the combined trade circulations of *Automobile Trade Journal* and *Motor Age*, approximately 75,000 paid, reach and cover in excess of 85% of the automotive dealer purchasing power in the United States.*

These two well-edited publications are not only subscribed for and paid for, but command the confidence and respect of the consequential components of our vast net work of automotive dealers from the Atlantic to the Pacific, and from Canada to Mexico.

Therefore if you want new retail outlets, and if you wish to keep present retailers favorably impressed concerning the profits advantage of your product, an adequate use of *Automobile Trade Journal* and *Motor Age* will prove most effective—and pleasingly low in cost.

Chilton Class Journal Company

PHILADELPHIA

Publishers of Automotive Business Papers

AUTOMOBILE TRADE JOURNAL
MOTOR AGE
AUTOMOTIVE INDUSTRIES
AUTOMOTIVE INDUSTRIAL RED BOOK

MOTOR WORLD WHOLESALE
CHILTON CATALOG & DIRECTORY
COMMERCIAL CAR JOURNAL
OPERATION & MAINTENANCE

*This fact is proved. A copy of the proof will be sent if you request it.

Reprinted from the September 1st issue of the Saturday Evening Post.

6 ways you profit

1. **Discounts**—Enable you to make nearly twice as much actual cash profit!
2. **Selected Dealers**—Assuring a greater market, more sales for each dealer, price maintenance.
3. **The Greatest Spark Plug Story Ever Told**—It will tempt any customer to buy.
4. **Money-back Guarantee**—Breaks down resistance; creates confidence and sales.
5. **Increases Unit Sales**—The Pyro-Action guarantee is a powerful sales aid in selling 4, 6 or 8 plugs instead of just 1 or 2.
6. **Distinguishes Your Store**—Pyro-Action Plugs make a friend of every customer because of the benefits they impart to any car.

Join the Crusade against Spark Plug Paralysis

You probably haven't any apparent trouble with your spark plugs. You may therefore conclude that your present plugs are good enough. But... just once the facts about Spark Plug Paralysis... have clearly it is crippling 9 out of 10 probably yours, too. To combat this trouble, leading automobile dealers throughout the country have organized a Crusade against Spark Plug Paralysis. In this advertisement you are offered an opportunity to join this Crusade and thereby for yourself the benefits will grow to the entire motoring public.

SPARK PLUG PARALYSIS gets its start from a strong light from the motor you install a new set of plugs and start your engine, powerful particles begin their destructive action.

The most likelihood of these facts is carbon. It begins in the crevice of the plug... then it builds up there which part of the electric current to pass.

In the early stages of Spark Plug Paralysis you may not even notice these facts. But as spark plug gradually progresses, then all signs become more and more pronounced. The car hasn't its old pep. It lags on the highway. It gives up on hills. You have to shift gears more often. Well, the car isn't as good as it used to be. You just begin yourself to be in trouble.

But it isn't inevitable. Your car is merely showing symptoms of Spark Plug Paralysis.

Now Robert Bosch, pioneer spark plug manufacturer and inventor of Original Bosch Magneto, has developed a spark plug which makes itself enemy as long as you drive your car.

This is due to its Pyro-Action... a combination of factors which enables it to defy spark plug paralysis. To mention one factor, this plug is provided with an insulator which will not crack from excessive heat. Hence it absorbs and retains sufficient heat to burn up carbon, excessive oil and liquid fuel, as fast as they touch the insulator.

Pyro-Action Spark Plugs earn their own cost by saving gasoline! They will give your motor new vitality, new pep, new power, better pick-up. And there will be more than benefits, not merely for a few thousand miles but longer than you have ever known before!

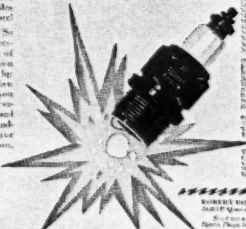
We ask you to prove it—at any risk. So we make this offer: "Replace" your present plugs with a set of Robert Bosch Pyro-Action Plugs, we recommend for your passenger car. Then compare the difference in your motor's action as a result of their use. If you are not satisfied, your money will be refunded. If you are satisfied, we will supply you, no coupon is right.



The Original
Bosch
Pyro-Action
SPARK PLUGS

Pyro-Action Plugs for passenger cars, buses, trucks, tractors, motor boats, airplanes, etc. are made by Robert Bosch, the center of the world-famous Original Bosch Magneto, Generator, Pump, Battery, Ignition, etc. Not all Bosch Plugs are Original-Bosch Plugs. For your protection look for full name Robert Bosch on each end of the plug.

WHOLESALE AND DEALERS Robert Bosch Pyro-Action Spark Plugs offer important opportunities. It may be a new outlet for your business.



ROBERT BOSCH & CO., INC.
500 Fifth Avenue, New York City, N. Y.

Send for your free copy of the Pyro-Action Spark Plug Story (Don't let this chance pass!)

I am interested in your Pyro-Action Spark Plugs. Please send me your literature.

Name _____

Address _____

City _____

State _____

Zip _____

Come on, dealers, Enlist in this Crusade!

ABOVE we reproduce in miniature the first advertisement announcing the nation-wide Crusade against Spark Plug Paralysis. This full page announcement appears in the September 1st issue of the Saturday Evening Post. It is going to sell Spark Plugs . . . Original-Bosch PYRO-ACTION Spark Plugs . . thousands of Pyro-Action Spark Plugs. Will you be among the nation's important dealers who are joining this Crusade . . and profiting by it in the 6 ways listed at the upper left?

Want more information about the Crusade? Write or wire for comprehensive broadside, to Robert Bosch Magneto Co., Inc., 3601H Queens Boulevard, Long Island City, New York.

Trade Mark  Robert Bosch, A.-G.



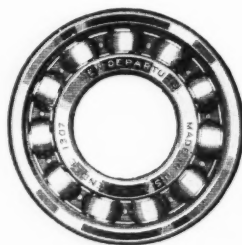
Many Hydroplane Victories Won On New Departure Ball Bearings

A whole fleet of records have recently been overhauled by Ralph Snoddy and his gallant trio of hydroplanes, *The Spitfire*, *Miss Rioco* and *Angeles "I"*.

New Departure Ball Bearings rigidly support the gears driving the overhead cam shafts and reduce the friction and heat which would destroy plain bearings in the supercharger impellers.

Mr. Snoddy gives New Departures their share of credit for the remarkable performance of the Miller engines with which these craft are powered.

New Departure Ball Bearings reduce maintenance expense and add long life in every kind of mechanism—in automobiles, airplanes, agricultural and industrial machinery.



New Departure Ball Bearings

The New Departure Manufacturing Co.,
Bristol, Connecticut
Chicago • Detroit • San Francisco

MOTOR AGE

VOLUME LIV

Philadelphia, August 30, 1928

NUMBER 9

August Production Will Surpass July

September Also Seen as Big
Month With 400,000
Output

MANY ORDERS

NEW YORK, Aug. 27—Continuance of automotive manufacturing in September at a rate exceeding 400,000 cars a month is practically assured by the large number of orders which will be carried over into that month by leading car manufacturers. Orders for models presented during the last two months have run far ahead of factory production capacity, demand in recent weeks being almost as heavy as in the days immediately following the car introductions.

Combined production figures of United States and Canadian factories in July show a total output of 415,671, comparing with 425,114 in June and with 279,472 in July last year. All indications at this time are that the August total will surpass July, though the excess over August, 1927, will probably be smaller.

Trade Publications Combine

PHILADELPHIA, PA., Aug. 27—Combination of *The Automobile Trade Journal* and *Motor Age* into a single monthly publication devoted to the interests of the automotive trade was announced here today by the Chilton Class Journal Co. This merger of the two oldest automobile trade publications in the country was brought about, according to C. A. Musselman, president of the company, to help further the progress toward more efficient marketing methods which has been an important concern of the automotive industry for some time past. Both magazines first began publication in the fall of 1899.

The new publication will be called *Automobile Trade Journal and Motor Age*, and the first issue will be December.

Canada Ford Gains

FORD CITY, ONT., Aug. 24—Ford Motor Co. of Canada, Ltd., has reached and exceeded peak production with a total of more than 500 cars a day.

Jordan Offers New Model

CLEVELAND, Aug. 27—A five-passenger landau brougham on the Air Line eight chassis has just been an-

*Luigi Rosi Wanted
a New Car for a
Shroud and Got It*

+--++

LUIGI ROSI, Spokane, Wash., wanted to wear an automobile for a shroud. He became ill in July, went to the office of an attorney, and requested that he be buried in a certain make of car, "and there will be nothing to worry about," averred Rosi, although he didn't explain why.

His illness proved fatal and he was given a funeral as he desired with a new automobile for a casket.

nounced by the Jordan Motor Car Co. The new model lists at \$1,995, in keeping with the other models in the eight-cylinder line.

Foster Joins Trenton Co.

TRENTON, Aug. 27—W. M. Foster of Dallas, Tex., has been appointed sales representative for Texas, Louisiana, Oklahoma and Arkansas for Trenton Auto Radiator Works.

Offers Dry-Law Prize

NEW YORK, Aug. 27—A prize of \$25,000 for "the best and most practicable plan to make the Eighteenth Amendment effective" has been offered by W. C. Durant.

Kinkade Joins Lycoming

WILLIAMSPORT, PA., Aug. 28—T. H. Kinkade, familiarly known as "Doc," and recognized as one of the great airplane engine experts, has become affiliated with Lycoming Manufacturing Co.

O'Brien Aviation Inspector

BOSTON, Aug. 18—Massachusetts now has an aviation inspector connected with the Motor Vehicle Registry in the person of Robert L. O'Brien, who investigates complaints of low flying and similar infractions of the laws.

Erskine Heads P.-A. Board

BUFFALO, N. Y., Aug. 25—A. R. Erskine, president of Studebaker Corp. of America, has been made chairman of the board of Pierce-Arrow Motor Car Co. in its association with Studebaker and M. E. Forbes, head of Pierce-Arrow for many years, has been named president of the company.

G.M.C. Institute Will Be Enlarged

Greatly Increased Enrolment
Necessitates Additional
Floor Space

APPROVE PLAN

FLINT, MICH., Aug. 27—Extensive additions to the General Motors Institute of Technology made necessary by the greatly increased enrolment, have been approved by the executive committee of the General Motors Corp., according to an announcement made last Thursday by E. T. Strong, president and chairman of the Board of Regents of the Institute. The additions, consisting of 35,000 additional square feet of floor space, will be used to expand the capacity of all departments and laboratories. The original buildings were planned for an enrolment of 2000, but during the past year enrolment reached a figure of 7652 students.

Aside from the extension and spare time courses, the heaviest enrolment was in the foremanship training department, with a total of 3048.

Stuart With De Soto

LOS ANGELES, Aug. 27—Roy G. Stuart, formerly wholesale manager of L. W. Leavitt & Co., Willys-Knight and Whippet distributor, has been appointed a factory representative for southern California for De Soto. He is making his headquarters at William E. Bush, Inc., the new southern California De Soto distributors.

Millhoff Quits Miller

NEW YORK, Aug. 25—F. C. Millhoff, former general sales manager of The Miller Rubber Company for 16 years, and more recently manager of car and truck manufacturers sales, has resigned from the company.

Hubbs Joins Dunlap-Ward

DETROIT, Aug. 25—George C. Hubbs, for several years prominently identified with the motor car industry in advertising and sales capacities, has become associated with the Dunlap-Ward Advertising Co. as vice-president.

Carroll With G.M. Export

NEW YORK, Aug. 27—George Carroll, for the past four years New York district sales manager for Cadillac, will join General Motors Export Co. Sept. 1.

July '28 Output Exceeds July '27

Industry Shows Remarkable Gain; Period Usually Slack

WASHINGTON, Aug. 25—With 390,445 automobiles produced in July, 1928, the United States automotive industry is estimated by the Department of Commerce to have exceeded the production figures of July, 1927, by more than 120,000 vehicles, according to data based on factory sales.

In July, 1927, the total production figures for passenger cars and trucks was 268,485. The usually slack month of July in this year moreover was only 6522 units behind the June total production figures.

Butcher Returns to Phila.

PHILADELPHIA, Aug. 27—Harold E. Butcher, newly appointed vice-president of Edward G. Budd Mfg. Co., builder of all-steel bodies, has just returned from England.

Organize Gun Club

PHILADELPHIA, Aug. 28—A gun club has been organized among the employees of Edward G. Budd Mfg. Co.'s local plant. William B. Reed, treasurer of the Budd Company, has been elected president, and a clubhouse has been erected on his property at Conshohocken.

Meyer Wins at Altoona

ALTOONA, PA., Aug. 24—Louis Meyer, 26-year-old South Gate, Calif., auto race driver, drove his Stutz Blackhawk Special 200 miles without a single stop and captured the Altoona

With Manhattan



"Dave" Warfield

MANHATTAN RUBBER MANUFACTURING CO. has added to its organization, E. E. Warfield, well known as "Dave," for many years in the automotive replacement field, in connection with the merchandising of the *Hycoc* line

speedway's international classic event Sunday before a crowd of 65,000 persons. He averaged 117 miles an hour.

Bob McDonogh, San Francisco, driving the Flying Cloud car of last year's champion, Pete DePaolo, finished second. Other finishing drivers were:

Third—Fred Comer (with Cliff Woodbury as relief driver from 100th lap to 160th lap, the finish), Boyle Valve Special.

Fourth—Billy Arnold, Chicago, driving Boyle Valve Special.

Fifth—Dave Evans, San Antonio, Texas, driving Chicago Insurance Special.

Junk 1000 Cars in Two Months

'Frisco Dealers Enthusiastic at Success of Safety Plan

SAN FRANCISCO, Aug. 24—More than 1000 cars have been junked by the Motor Car Dealers' Safety and Elimination Bureau, since it commenced operations eight weeks ago. All these cars were turned in by the members of the Motor Car Dealers' Association of San Francisco, of which the safety and elimination bureau is a branch, according to Arthur D'Ettel, business manager of the dealers' association.

Members are enthusiastic at the possibilities offered by the new plan.

Gas Tax for Bay State

BOSTON, Aug. 25—Massachusetts has at last joined the states that have gasoline taxes for motorists. The period of 90 days during which it might be possible to secure a referendum for the law has passed and no names were filed to block it. As a result it goes into effect Jan. 1.

Olds Coast Men Meet

LOS ANGELES, Aug. 25—Dealers and sales executives comprising the Oldsmobile sales organization in southern California gathered in Los Angeles recently to hear the Oldsmobile plans and policies for the coming fiscal year. Thomas M. Ray, California manager for the Olds Motor Works, was in charge of the gathering, and was assisted by Asher C. Jones, assistant manager; J. G. Jamison, sales promotion supervisor, and W. H. Miller, service and parts manager.

The Automotive Calendar

SHOWS

Automotive Equipment Association, Coliseum, Chicago, Oct. 22-27.
Baltimore, 5th Regiment Armory, Jan. 19-26.
Boston, Mechanics Bldg., March 2-9.
*Chicago, National, Coliseum, Jan. 26-Feb. 2.
Cincinnati, Music Hall, Jan. 13-19.
Cleveland, Public Auditorium, Jan. 26-Feb. 2.
Dallas, Texas, Oct. 6-21.
Denver, Colo., Auditorium, Feb. 11-16.
Detroit, Convention Hall, Jan. 19-26.
Eastern States Exposition, Springfield, Mass., Sept. 16-22.
Kansas City, Mo., American Royal Bldg., Feb. 9-16.
Los Angeles, Washington Park, March 2-10.
Louisville, Ky., Armory, Jan. 21-26.
Milwaukee, Wis., Auditorium, Jan. 12-19.

National Standard Parts Association, Cleveland Auditorium, Oct. 29-Nov. 3.
Newark, N. J., Jan. 12-19.
*New York, National, Grand Central Palace, Jan. 5-12.
Peoria, Ill., Feb. 5-9.
Philadelphia, Commercial Museum, Jan. 12-19.
Salon, Automobile Salon, Inc., Hotel Drake, Chicago, Jan. 26-Feb. 2.
Salon, Los Angeles Motor Car Dealers Assn., Biltmore Hotel, Oct. 17-20.
Salon, Automobile Salon, Inc., Hotel Biltmore, Los Angeles, Feb. 9-16.
Salon, Automobile Salon, Inc., Hotel Commodore, New York, Dec. 2-8.
Salon, Automobile Salon, Inc., Palace Hotel, San Francisco, Feb. 23-March 2.
San Francisco, Civic Auditorium, Jan. 26-Feb. 4.
Springfield, Mass., Municipal Auditorium, Feb. 25-March 2.
St. Louis, City Market Bldg., Feb. 4-9.
Syracuse, Feb. 4-9.

Pennsylvania Automotive Association, Allentown, Pa., Oct. 15-16.
World Motor Transport Congress, Rome, Sept. 25-29.

CONVENTIONS

Automotive Equipment Association, Coliseum, Chicago, Oct. 22-27.
National Standard Parts Association, Hollenden Hotel, Cleveland, Oct. 29-Nov. 3.
Ohio Council, National Automobile Dealers' Association, Hotel Gibson, Cincinnati, Sept. 13-14.

S.A.E.

Detroit, Book-Cadillac, Annual Meeting, Jan. 15-18.
Newark, Robert Treat Hotel, Transportation Meeting, Oct. 17-19.
New York, Annual Dinner, Hotel Astor, Jan. 10.

RACES

Salem Oct. 12
*Will have special shop equipment exhibit.

Oct. 10—Marketing Annual for 1929—Motor World Wholesale.
Nov. 17—Production and Factory Equipment Issue—Automotive Industries.

Oakland Field Heads Convene



IN preparation for the 1928-29 selling year, which began officially on Aug. 1, leading field executives of Oakland Motor Car Co. gathered last week for a four-day convention with officials of the home office. W. R. Tracy, vice-president in charge of sales, assisted by E. M. Lubeck and W. B. Sawyer, respectively Western and Eastern sales managers, headed the meetings.

Oldsmobile Expands

DETROIT, Aug. 27—Plans for further plant expansion to involve expenditures of from one to one and one-half million dollars were announced Saturday by I. J. Reuter, president of the Oldsmobile Motor Works. The new buildings will house the tool design department and will furnish additions to the enameling plant, the present steel metal plant, and the new heat treating plant recently completed.

Chandler-Cleveland Net

Chandler-Cleveland Motors Corp. reports for the quarter ended June 30, 1928, net profit of \$3,796, equivalent to two cents a share on 350,000 no par shares of \$4 preference stock. This compares with \$52,266, or 14 cents a share, on preferred stock in preceding quarter, and \$411,603, or 22 cents a share, on 280,000 no par shares of common stock, after allowing for the dividend requirements on preference stock, in the second quarter of 1927.

Goad Adds Oldsmobile

SAN ANTONIO, TEX., Aug. 25—Goad Motor Co., Cadillac and LaSalle distributor in Southwest Texas, has taken over the Oldsmobile franchise, for the entire San Antonio trade territory. This includes wholesale and retail sales for the entire Oldsmobile line.

Milan Chevrolet to Build

SAN ANTONIO, TEX., Aug. 28—Construction is soon to begin on a new home for the Milan Chevrolet Co. The building is to be a two-story, with provision made for addition of a third story.

N. C. May Regulate Gas Sales

RALEIGH, N. C., Aug. 25—An effort to obtain enactment of legislation providing for regulation of the sale of gasoline in North Carolina will

be made by the North Carolina Independent Oil Dealers' Association when the General Assembly meets here next January, it was announced by Charles S. Wallace, of Morehead City, president of the association. It is expected that the effort will be productive of good results.

Stonewall Motor Takes De Soto

CHARLOTTE, N. C., Aug. 27—Stonewall Motor Co. organized by Charles E. Lambeth, has been made distributor of the De Soto line of cars for a territory which includes 10 counties of this state and South Carolina. W. T. Laslie, Jr., formerly of Charlotte, lately with the Lambeth Motor Company in Atlanta, Ga., will return here to be assistant manager in charge of sales of the new company.

Schedule of Used Car Prices Saved This Man Plenty

— + — + —
JUSTICE J. D. Hinkle, of Spokane, Washington, did not rule that, "He who steals my 1921 Ford steals trash" but he did hold that a prisoner was right in contending that a 1921 Ford is not given a valuation of \$25 in schedules and he permitted him to plead guilty to a petty larceny charge. He was sent to jail for three months.

The man picked up an old Ford while on a drunken spree and was charged with grand larceny. When he sobered up he told the justice that schedules of Fords made in 1921 do not give them a valuation as high as \$25 and that the charge of petty larceny applied.

Stutz Earnings \$417,004.40

INDIANAPOLIS, Aug. 24—Ernst and Ernst, official certified public accountants, have just finished the usual semi-annual audit of the books of the Stutz Motor Car Co. of America, Inc. Their audit shows the net profit of the company for the first six months of this year was \$417,004.40, after deductions of every kind and provision for Federal income taxes.

Fisk Production Heavy

CHICOPEE FALLS, MASS., Aug. 27—Fisk Rubber Co. is producing from 29,000 to 30,000 tires daily in the Chicopee Falls and Cudahy plants, and 12,000 of these are sent out as original equipment of large car manufacturers, according to Harry G. Fisk, vice-president. Outlook for fall business is reported as excellent.

More Ford Forgings

SPRINGFIELD, MASS., Aug. 28—Moore Drop Forging Co. is operating at capacity with two shifts daily, with some departments working 24 hours a day. Forgings are chiefly for automotive products, and the volume of production for the Ford Motor Co. has steadily increased.

Fred Johnson Advanced

ST. LOUIS, Aug. 28—Fred Johnson of the Wagner Electric Co. has been transferred from the St. Louis sales office, of which he was in charge, to the managership of the Los Angeles branch. He was manager of the St. Louis office for the last 21 years.

Western Durant Adds 200

PORTLAND, ORE., Aug. 25—According to Norman De Vaux, general manager of the Western Durant plant, the company has made more than 200 Durant dealer appointments since Jan. 1.

Firestone's New Plant Ready Soon

Seven-Million-Dollar Factory at Los Angeles to Serve Third of U. S.

LOS ANGELES, Aug. 27—The new \$7,000,000 Western factory of the Firestone Tire & Rubber Co. is now rapidly nearing completion in Los Angeles and is expected to be formally opened late in September. The new Firestone project here is attracting wide interest throughout the industry as it has been designed, built and equipped to definite specifications of Harvey S. Firestone to make the local plant what is said by officials of the company to be the most modern tire manufacturing institution in the world.

Russell A. Firestone will serve as executive vice-president of the Western organization. R. J. Cope, formerly branch manager at Los Angeles, is general manager. T. E. Pittinger, formerly superintendent of the Firestone plant at Hamilton, Ontario, Canada, occupies a similar post at the new Los Angeles factory. Nelson Myers is resident engineer.

When completed, the Western factory will produce the Firestone line for a third of the United States and ship to overseas Pacific countries.

New Willys Plant at L. A.

LOS ANGELES, Aug. 25—The assembly plant of the Willys-Overland Automobile Co. now under construction in Los Angeles will be opened for operation Sept. 15, according to an announcement made by Colin Campbell, vice-president in charge of sales of the company, who is now in Los Angeles. The program calls for the assembling of 300 cars daily.

Advanced



by Goodrich

MET P. J. Kelly, who has been made advertising manager of B. F. Goodrich Rubber Co., succeeding Gates Ferguson, who resigned to take up other work. For the past year Mr. Kelly has been assistant advertising manager at Goodrich.

Nagel Shows New Product

DETROIT, Aug. 27—Nagel Electric Co., Inc., of Toledo, is offering a complete new line of heat indicators in four different models for clamping to the steering column, the dash, and mounting flush on the dash for all makes of cars. Besides this diversified line the Nagel Electric Co. will feature three models of instruments expressly designed for the Model A Ford and the Ford AA Truck.

Spanish Names for De Soto 6 Models

Bronson Gives Interesting Reasons for Body Nomenclature

DETROIT, Aug. 27—In keeping with its Spanish background the recently announced new Chrysler-built De Soto Six has been provided with Spanish names for all seven body styles, says Karl H. Bronson, De Soto director of advertising.

"We were moved for two reasons to choose new names to designate the De Soto Six body styles," says Mr. Bronson. "First, the car was named in honor of the fearless Spanish nobleman Hernando De Soto, discoverer of the Mississippi River. Secondly, the De Soto Six is a distinctly individual car and we felt that it warranted a distinctly individual nomenclature.

"As a result the body styles are named as follows: Roadster Espanol, Faeton, Coupe Business, Sedan, Sedan Coche, Sedan de Lujo and Coupe de Lujo. These names it will be noted bear a great resemblance to the existing terms used to designate motor car bodies. They are pronounced in almost exactly the same fashion as are the terms with which the public is already familiar. But their spelling is distinctly Spanish and lends color to the Spanish background which has been provided for the new car."

Sellman Names Dealers

LOS ANGELES, Aug. 28—W. A. Sellman, wholesale manager of Nash-Breyer Motor Co., announces the appointment of the Golden State Motor Co., as Nash dealer in Bakersfield and vicinity, and the appointment of Gail Krisher, as Nash dealer in Taft.



First Prize Winner

STERNBERG-WEBB MOTORS, INC., of 6035 Cottage Grove Avenue, Chicago, took first
Note the Oakland and Pontiac camps and the complete and comprehensive arrangement

'Hindcaster' Added to Proving Ground

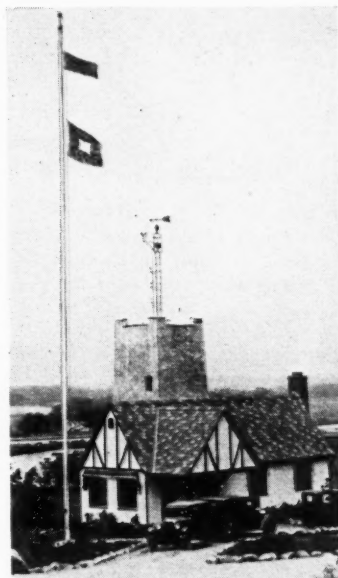
Unique Weather House Latest Aid to Checking Car Performance

General Motors Proving Ground has in response to a demand for greater accuracy added a weather house to its many ingenious scientific checking devices. The weather house is not a weather forecaster, but a weather "hindcaster." Here is a hypothetical instance of the manner in which the weather house assists the engineer in the precise task of measuring an automobile's merit:

The Chevrolet engineering division, in checking back on the performance of one of its models, might find that on May 9 its gasoline consumption exceeded slightly that of the preceding and following days. It might be found, too, that a little more water was required for the radiator and that fluctuations were noted in the speed, none of which effects would be discerned by the average driver.

The Chevrolet engineers will set out to find the cause of these variations. And one of the first aids they will call upon is the weather recorder. In checking back with the graphic weather records, the engineers might find that the wind velocity varied on May 9 between 6 and 10 miles an hour. On May 8 and May 10 it remained below 5 miles an hour throughout the day. Thus the engineers know in making their comparisons that the wind was a factor in the change and to what extent. In like manner they are able to tell exactly what effect the sunshine, rain, humidity or snow had to do with performance fluctuations on any given hour of any given day.

"Hindcaster"



This Picture

doesn't tell the story, but the column at your left will give you complete and authentic information. That's what we call service to readers. Here it is and there it is—all in a nutshell, so to speak

B. A. T. A. Business Booms

BALTIMORE, MD., Aug. 25—Records kept by the Baltimore Automobile Trade Association, Inc., show that marked gains have been made in new car deliveries during the summer as compared with the corresponding period of last year. In the first 10 days of August the increase was more than 40 per cent.

Automobile Men Take Up Aviation

Mechanics and Salesmen of Baltimore Enroll for Courses

BALTIMORE, Aug. 25—Many automobile salesmen and mechanics of Baltimore and nearby cities are taking up aviation, convinced that it is to their advantage to be acquainted with the mechanics and other details of this form of transportation and also with airplanes.

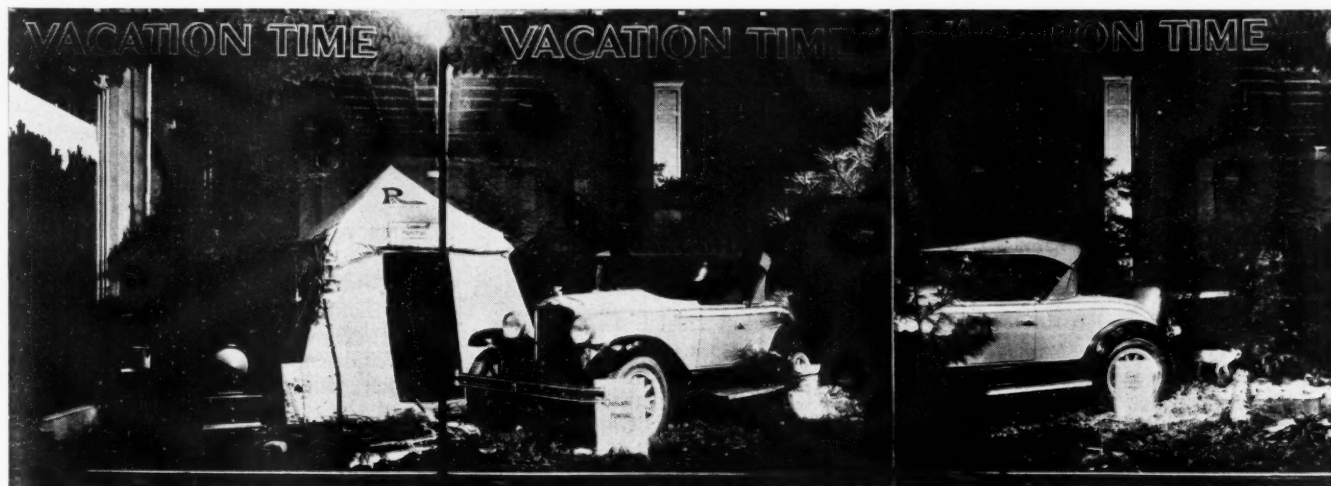
Baltimore is one of the cities which recently was granted permission to issue temporary licenses to student aviators. They are issued by Dr. H. R. Carroll, of the United States Public Health Service, who gives the physical examination. These licenses are for a period of 30 days.

Seattle 72 Car Club Feted

SEATTLE, WASH., Aug. 27—Chevrolet Motor Co. was host to 40 salesmen, members of the famous "72 Car Club," who have again during the past year been able to retain their membership in this unique organization by delivery of 72 or more Chevrolet cars.

They were welcomed to Seattle by T. F. Hildebrand, zone sales manager at a breakfast in the Olympic Hotel. After a short business meeting the members were treated to a tour of the Boeing Airplane factory, followed by a trip around the sound on the palatial private yacht "Hiawatha." On their return they were all treated to a ride in the Boeing Flying boat Zephyr.

Officers of the club are: President, Joe Wilcox, Yakima; vice-president, Charles Yinton, Yakima; secretary, C. A. Bate, Seattle; treasurer, Don Miller, Wenatchee.

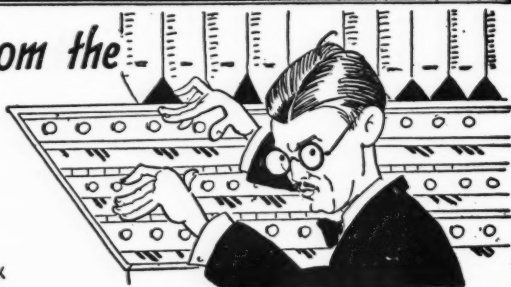


in Oakland Contest

prize of 100 dollars cash in the window display contest held by the Oakland Motor Car Co. of the windows. The display attracted many thousands of interested spectators

Tunes From the House Organs

GEORGE T. HOOK
AT THE CONSOLE



HERE we are back in the studio again ready to take up the tune from where we left off just before we started to sleep away our vacation. And we seat ourselves at the console, rattle off a little finger practice in the form of "now is the time for all good people to come to the aid of their party" and we're ready to begin the regular program.

Quite a number of the latest issues of various house organs piled up on the console in our absence. In spite of the weather the editors all seem to be doing nicely, thank you. So before reproducing some of their heavier stuff we'll open up with something light. For instance, how about this bit of humor from Horst's Profits: Mamma—"Jacob, com' in de house; you're all vet!" Jacob—"No I ain't, mamma!" Mamma—"Yes, you DID!"

What is a good dealer? The *Exide News* asked itself that question and then proceeded to answer it thus:

"A good dealer is one who faithfully represents the manufacturer whose franchise he holds; who obtains for the manufacturer at least that share of the available business to which the manufacturer is entitled by virtue of the quality of his product, and who does this at a profit to himself, commensurate with the time and money expended by him. Do you measure up to these specifications?"

"Many dealers are content with a relatively small share of the available business in their respective communities. Perhaps it is because a certain amount of business just comes into his place without any effort being put forth by him that the dealer takes for granted he is obtaining his share of what is available. Or, perhaps the dealer is content to take only a small part of what his share of the profits to be made from the business really amounts to. * * * There is plenty of room for all in this great industry, but only the good will survive."

People are never so stubborn and thick-headed as when you are trying to get your idea across.—Trindl Tips.

In the line of garage maintenance, Gilmer's *Happy Van Club News* makes these suggestions: (1) Keep the floors and walls clean. (2) Keep metal equipment clean and polished. (3) Keep windows washed. (4) Keep a tidy office and entrance. (5) Install danger signs at the exits and entrances to your garage. (6) Post safety signs in conspicuous places in and about your garage.

Yes, about the only secret there is to sales success is sales effort, and it's an open secret that many salesmen just can't seem to learn.

"Expose your proposition to business" is one of the fundamental principles of salesmanship, and to expose your proposition means to let your prospects know ALL ABOUT IT.—T-N Parts.

A recent extensive questionnaire to thousands of dealers revealed among other things that "getting people into the store" is regarded the most important factor in achieving success at retailing, according to *The Mohawk Messenger*. To attain this object the following factors contribute and are listed in the order of their importance as indicated by the vote: (1) Location; (2) The right kind of advertising; (3) Correct buying; (4) The right goods and prices; (5) Being on the job. Retailers themselves have discovered that next to location, the right kind of advertising is of utmost importance in "getting people into the store."

Politeness is merely recognizing the rights of others—the hog fights for his place in the trough.—The Firestone Non-Skid.

Sutton Banquets 150

CHARLOTTE, N. C., Aug. 25—Approximately 150 dealers, salesmen and field representatives were guests of A. K. Sutton, president of A. K. Sutton, Inc., of this city, distributor of Philadelphia storage batteries and radio equipment, at a sales conference held here. Those attending the meeting, which was concluded with a banquet, came from all sections of the state.

Midland Steel Earnings

DETROIT, Aug. 21—Midland Steel Products report earnings for July of \$294,002 after all charges, except Federal taxes and profit sharing. This compares with \$206,200 for July, 1927.

Found Davison Tire Service, Inc.

ST. PETERSBURG, FLA., Aug. 28—Davison Tire Service, Inc., has been chartered here.

Rains Collect Big Road Tax

Travel In South Crippled By
Flood Waters; Cost Is
Heavy

CHARLOTTE, N. C., Aug. 27—Thousands of miles of rural roads in North and South Carolina, Virginia and Georgia were entirely useless during the recent rain and flood siege, a wide-spread investigation reveals.

Out of Atlanta there were but two roads which could be traveled during the flood without danger and with any degree of comfort. These were the permanently paved highways leading to Macon and to West Point.

No through state highway could be traveled, with the exception of the 50-mile stretch of concrete leading south from Savannah on the Coastal Highway.

To calculate the cost of roads susceptible to unusual weather conditions is next to impossible, officials say.

Wells Quits Metal Spec.

CHICAGO, Aug. 28—C. A. Wells, for the past several years sales manager of Metal Specialties Manufacturing Co., Chicago, has resigned.

Stockbridge AC Sphinx Head

BIRMINGHAM, ENG., Aug. 27—Norman F. Stockbridge has been appointed managing director of the AC Sphinx Sparking Plug Co.

The new managing director is a native Englishman, having been born in Redditch, Worcestershire. He left Flint several weeks ago for his new post accompanied by Taine G. McDougal, vice-president of the AC Spark Plug Co., who is in charge of the AC foreign plants located in England and France. Mr. McDougal will return to Flint late this summer.

Try Out New Display Plan

HARTFORD, CONN., Aug. 24—Members of the Hartford Automobile Dealers Association will have a combined exhibit at the Connecticut State Fair Labor Day week. All exhibits are to be placed in one large tent. Every car will bear a name and price tag and there will be no salesmen present, it is said by members of the association.

Gantt With Capital Motors

COLUMBIA, S. C., Aug. 24—H. L. Gantt, formerly connected with the Overland-Knight Co. and the Waters-Pollock Motor Co. of Columbia, has joined the staff of the Capital Motors, Inc.

Stalnaker-Hudson Co. Formed

KISSIMMEE, FLA., Aug. 25—The Stalnaker Hudson-Essex Co., Inc., has been organized here by J. W. Stalnaker, E. Stalnaker and D. M. Funk.

Calif. Gas Tax to Total 32 Millions

Huge Sum Will be Available to State; is Record Amount

SAN FRANCISCO, Aug. 25—Returns to the state from the 1928 collections of the three-cent gasoline tax will be \$32,000,000 or more, according to an estimate prepared by the state board of equalization. For the first quarter of 1928, collections from this tax totaled \$8,477,293.14, breaking all records, and exceeding collections for the same quarter of 1927 by \$3,124,699.10. The additional one cent on the tax, which was imposed at the end of July, 1927, is credited with the greater part of the increase.

Sontag Establishes Office

HARTFORD, CONN., Aug. 27—E. A. Sontag, district manager for Graham-Paige, will make his headquarters at State Motors, Inc., working the territory from this point.

Chandler Shipments Up

DETROIT, Aug. 27—Chandler-Cleveland's third-quarter shipments will exceed the total shipments for the first half of the year and August shipments will be the largest in seven years, according to F. C. Chandler, president.

Ervin Quits Moto Meter

LONG ISLAND CITY, N. Y., Aug. 27—Henry Ervin, sales manager of the Moto Meter Co., has resigned. His successor has not been announced.

Ford Dealer Adds Planes

NEWARK, N. J., Aug. 27—What is said to be the first aeroplane for retail sale in this city was put on display by Morgan Motor Car Co., Ford dealer. It is a Travelair biplane with a 90 hp. Curtiss engine.

Demonstrations of this product are given at Hadley Field with Kenneth Unger, mail flyer, as the pilot.

Gets \$1,175,000 Order

BLOOMFIELD, N. J., Aug. 28—The American-LaFrance & Foamite Corp. here announces that it has received orders for 240 trucks and fire engines totaling \$1,175,000 from the boroughs of New York City and that work will be started immediately to rush the order for early delivery. The order, one of the largest from any municipality this year, will mean speeding up operations here, the plant having been on full time all this year.

Gulf Lets \$174,500 Contract

BAYONNE, N. J., Aug. 27—Gulf Refining Co. awarded to the Foundation Co. of 120 Liberty Street, New York, the contract for the construction of a concrete pier with a runway leading

Capetown to Cairo—Or Bust!



HERE'S just one of the things that make Chevrolet's Capetown to Cairo expedition a great sporting feat. In this instance the bridges over the m'Lah river have been washed away. The only way across is to take a chance on the stamina of the car—as shown in the picture.

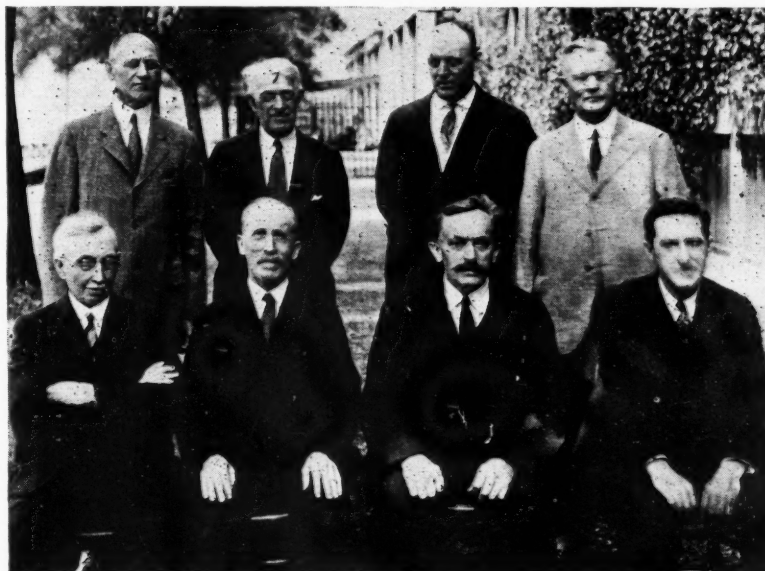
from its barrel house at the Constable Hook, Bayonne, plant. The pier will be 550 feet in length and will cost \$174,500.

Found Dixie Sales and Service

ORLANDO, FLA., Aug. 28—Dixie Sales & Service Co., has been chartered here by Emil Metzinger, C. Metzinger and Julian Metzinger.

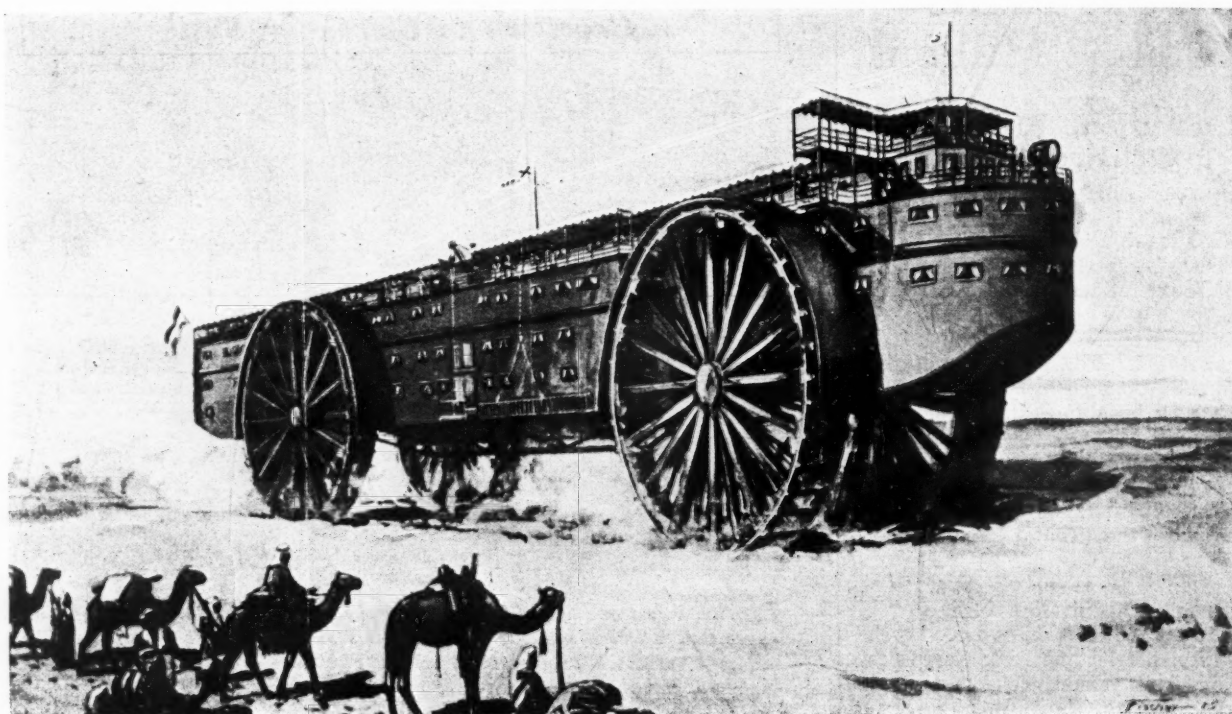
Add to Sterling Plant

LANCASTER, PA., Aug. 24—Improvements and additions to the main plant and the Sterling plant of the Bearings Co. of America now complete will increase capacity 50 per cent. The additions have been made necessary, the company reports, to take care of constantly increasing demand for its products from automotive buyers.



Get Diamond Pins

FIFTEEN thousand persons disported themselves at the annual basket picnic and outing of the Pierce-Arrow employees, held recently. The guests of honor were the men who were added this year to the honor roll, composed of those who have been in the service of the company continuously for 25 years; employees so honored this year were Rudolph Gerstner, Jacob P. Obenauer, Henry F. Schneider, Charles G. Schnaidt, James R. Way, Robert O. Welker, Samuel Heap and Frederick Bradley



A Ship of the Desert

THIS mammoth desert liner—you read all about it in MOTOR AGE of Aug. 16—will be 125 feet long, 25 feet wide and 45 feet high—if and when it is built. The sketch above is not taken from the original plans but is the conception of an artist with a wonderful imagination. We'd prefer to walk our miles with camels

Studebaker Brake Test

SOUTH BEND, IND., Aug. 27—Tests recently conducted at Studebaker's \$1,000,000 proving grounds near South Bend by The Studebaker Corp. have revealed some interesting facts concerning the stopping power of the amplified action four-wheel brakes which are standard on all Studebaker and Erskine models.

Using as a basis for the tests a recommendation chart compiled by C. N. Maurer, traffic engineer of the Wisconsin state highway commission, it was discovered that stock Studebaker models not only meet Wisconsin braking requirements fully, but at every speed listed will stop the cars in less than half the distance called "safe" by the state traffic engineer's code.

Form Packard Charlotte Co.

CHARLOTTE, N. C., Aug. 24—The Packard Charlotte Co. was organized here recently to distribute the Packard line in this district. The firm is headed by P. C. Whitlock.

Wells Delivers 248 in July

SEATTLE, WASH., Aug. 25—July sales records of C. H. Wells, Inc., Chevrolet dealer organization, were shattered when this organization delivered in Seattle 248 cars. This is an increase of more than 90 per cent over the sales of July of last year.

Chrysler Order for Hayes

DETROIT, Aug. 24—A contract for bodies for the Plymouth sedan has been awarded by the Chrysler Corp. to the

Hayes Body Corp. It is expected that production will begin just as soon as the new dies and jigs can be installed. This is the largest single order ever received by Hayes Body.

Vice-President



H. W. Peters

Announcement has been made by Alvan Macauley, president, Packard Motor Car Co., of the appointment of H. W. Peters as vice-president in charge of sales to succeed Dr. H. H. Hills, retired. (See last week's MOTOR AGE page 12.)

Mass. Insurance Rates Up

BOSTON, Aug. 18—Massachusetts motorists have learned that the rates for insurance under the compulsory insurance law for certain classes of automobiles are going to get a big boost next year. As an example, some cars now paying \$29 are going to pay \$53, and other cars paying \$45 will be boosted to \$70.

Buy Erskines for Taxis

SOUTH BEND, IND., Aug. 28—Erskine sedans are now operating as taxi cabs here. They were purchased recently by the Indiana Cab Co., which plans to buy five cars a week until the fleet reaches 40.

Millionth Yard of Concrete

SHEBOYGAN, WIS., Aug. 18—Completion of the millionth square yard of concrete street pavement here today was celebrated by the entire city. State, county and other officials joined in congratulating the city on its achievement, which is said to be decidedly unusual for a community of this size.

Takes on Gardner Line

ROCHESTER, N. Y., Aug. 20—Clevenger & Dollinger, Inc., has been appointed Gardner distributor in this territory. P. R. McKenna is sales manager.

Hudson Quarterly Dividend

Hudson Motor Car Co. has declared quarterly dividend of \$1.25 payable Oct. 1 to stockholders of record Sept. 11.

Durant Business Gaining Steadily

Sales Totals from Twenty
States Show Big July
Increase

ELIZABETH, N. J., Aug. 28—Durant registration figures have shown a constant advance of the Durant line ever since early in January. The latest figures available, those of July from 20 states, show the increase in sales for the first seven months of 1928 to be 27.9 per cent over the corresponding period of last year and a gain of 54 per cent in July over the same month of 1927, according to T. S. Johnston, assistant to W. C. Durant, president of Durant Motors. "Our sales," says Mr. Johnston, "are not spasmodic, but are consistent, the sales for every month this year showing a gain over the corresponding months of preceding years. Sales are not confined to any particular sections but are widespread and a sharp increase has been made in the most critical buying centers of the country. The Durant line has made enormous gains in practically all of the New England States, the sales for July in Connecticut alone being 71 per cent greater than in July last year. In Illinois the sales increase in the month of July was over 66 per cent greater than the same month last year."

Excello Has New Home

DETROIT, Aug. 25—Excello Tool and Manufacturing Co., manufacturer of drill jig bushings, grinder spindles and aircraft engine parts, moves into its new Detroit plant at Oakland Blvd. and Fourteenth, which will house all its operations.

Shirreffs Forms New Firm

LOS ANGELES, Aug. 25—Jim Shirreffs, president of S & M Lamp Co., of Los Angeles, pioneer manufacturers of automotive auxiliary lighting units, announces the formation of a subsidiary, the Junior Lite Co., to distribute automotive lines in the national market.

Taylor-Hollister Deal

LOS ANGELES, Aug. 28—Taylor Manufacturing Corp., manufacturer of brake testing equipment, is reported to have concluded an agreement with the Price-Hollister Co., whereby the latter concern will take over the manufacture and entire distribution of their product.

Found Hoke Motor Co.

RAEFORD, N. C., Aug. 27—Hoke Motor Co., has been organized here by J. D. Hobbs and associates.

Newton Motor Co. Sold

SALEM, ORE., Aug. 28—Newton Motor Co. has been sold to the States Motor Co. The Hudson-Essex franchise was included in the deal.

Jest—A Bit Cynical

By Sherman Swift

A GROCERY WHOLESALER bought one truck. The purchasing agent explained that this was to be used for general haulage; all deliveries to customers were made by a trucking firm hired for the purpose. "It's less expensive for us to do that than it is to have our own fleet," explained the purchasing agent. The salesman acquiesced. He had hoped to make a larger sale when the lead was given to him, but of course, if the firm hired outside trucks for deliveries they wouldn't have use for more than the one truck. And an order for one unit was better than no sale at all.

A month later the salesman was scanning the report of local registrations. He couldn't believe his eyes. The grocery company was listed as having purchased a fleet of trucks. That, of course, could mean but one thing: They were going to do their own delivering.

A telephone conversation with the purchasing agent confirmed the truth of the surmise. "I'd like to have had a chance to bid on that fleet," the salesman told the buyer. "You like the truck I sold you, don't you?"

The purchasing agent said he did indeed like the truck. It performed excellently and the operating cost was low. "But I had to have light trucks for delivery work," he said.

"We have light trucks of the same make as that," returned the salesman.

"You never told me anything about it," answered the p.a., apparently surprised. "As a matter of fact, I don't think you've ever been back to see how the truck you sold was working, have you?"

And the "salesman," because he realized the implied neglect of duty, hung up the phone, softly, without replying.

Another instance of similar nature: Doctor Jones bought a phaeton from salesman Smith. The physician admitted that he was a fresh air bug and nothing would do but a sport car. "It doesn't even have to have a top," he said, "I hate 'em."

That was that. Smith liked the Doc. He was an easy man to sell and the contact had been pleasant.

A couple of months later Smith passed a new coupe. The driver's face seemed strangely familiar. "I've seen that man somewhere," mused Smith, as he drew up to the entrance of a bank. "Wonder who he was?"

In a moment he knew. The car stopped at the curb and Doctor Jones got out.

"What's the matter with your car," asked the salesman as they shook hands.

"This is my car," answered the doctor pleasantly. "I had to have a closed job for bad weather. Takes too long to stop and put up the top on the phaeton," he explained, in the manner of a man to whom the purchase price of a car is mere cigarette money. "So I bought another one."

Still another example of the value of "call-backs"—I hope I'm not boring you: Mrs. Brown has several cars. Salesmen find her a willing listener and she dotes on looking at pictures of new models. Larry Johnson had a pocketful of beauties and he sold her a medium-priced coupe, "for the girls to use. They're always taking their father's or my car just when we want to use it," Mrs. Brown explained. The sale was a clean piece of business; Mrs. Brown wouldn't consider parting with one of her ancient chariots for anything.

Just before the family started away for the summer, Larry saw the youngest girl riding in a new speedster with a salesman from another agency. That could mean but one thing: a demonstration, and a demonstration, of course, meant a possible sale. He got Mrs. Brown on the telephone, apologized for disturbing her, and asked if the purchase of another small car was contemplated. He was about an hour too late. Mrs. Brown, who before her marriage had lived across the tracks, was quite frank in her explanation. "The kids fought worse than ever over the one car," she told Larry, "so their dad said get 'em another."

The only way for a salesman to be sure that he is getting all the additional installation business in his territory is to make clean, legitimate sales and keep following them up. That means hard work but the results will justify the effort.

Henry Van Dyke once said of a man that complained of his ill-luck: "He is the kind of man who sets hare-snares on caribou trails." Mr. Van Dyke was endeavoring to show that results depend to a great extent on effort.

Mrs. Willard Adds to Achievements

Woman Driver Crosses U. S.
in Five Days; Drives
Stutz

INDIANAPOLIS, Aug. 27—Reports just received by Stutz Motor Car Co. tells of a remarkable automobile speed run made from New York City to Oakland, Calif., by Mrs. Lavia M. Willard, prominent society woman of New York. Driving a privately owned Stutz Black Hawk of standard design, she negotiated the 3324 miles in a total elapsed time of 5 days, 4 hours and 26 minutes. So far as records are concerned, this is the first known attempt upon the part of a woman to establish a coast-to-coast speed record.

It will be recalled that Mrs. Willard, on July 2 and 3, made a non-stop run in her Stutz Black Hawk from New York to Chicago in 22 hours and 48 minutes, in a contest sponsored by the New York Women's Automobile Club. The coast-to-coast trip, however, was not a competitive one but was made because of Mrs. Willard's personal interest in cross-country driving.

English Type Showroom

GRAND RAPIDS, MICH., Aug. 25—A new era—for this territory at least—in automobile showroom design has just been introduced by Kinsey Motors Inc., Oldsmobile dealers. The new building, just opened, is a replica of the masonry and weathered oak gabled homes which have stood for centuries in England.

Period design has been used for automobile showrooms before but usually of the Spanish or mission type and most frequently on the Pacific coast. It is a decided innovation in the Middle West.

Old English architecture was selected as being the most appropriate for the location and purpose. It radiates a warmth and hospitality that is inviting as well as presenting the appearance of permanence and stability.

May Acquire N. E. Service

ROCHESTER, N. Y., Aug. 28—A special meeting of common stockholders of the North East Electric Co. has been called for Aug. 30 to pass on a proposal to acquire all the common stock of the North East Service, Inc., which handles the retail and service branch of the company's business through distributors in all parts of the world. The meeting will be held at the company's offices here.

Palmer With Rochester Corp.

ROCHESTER, N. Y., Aug. 25—Vincent A. Palmer, has been appointed service manager of the Rochester Auto Parts and Radio Corp.

Ball Crank Opens in Detroit

DETROIT, Aug. 25—The Cincinnati Ball Crank Co. will open a branch office



By Lewis C. Dibble

JUST as synchrophase has become a well-established term in radio, so is Cadillac-La Salle determined to make "Synchro-Mesh" equally as prominent as regards automobiles. The new Cadillac-LaSalle cars which made their bow last week, besides innumerable fine appointments and new innovations, feature the "Synchro-Mesh" transmission.

Whoops, my dear! Here's big news. The Ford Rouge plant is no longer in Fordson. It's now located in Dearborn. Impossible! Nonsense. They've changed the name of Fordson to Dearborn and that no doubt was cheaper than if they had moved the factory.

As hosts, we take off our panama to Pete Sawyer and Macpherson Smith, of Howell, who arranged a great golf tournament and dinner dance at the Chemung Hills Country Club for the Automotive Boosters Club of Detroit. Incidentally the Gabbler (see top of column) won the putting contest which carried as a prize a unique golf club. It was designed by Charley Ward of the Detroit Ball Bearing Co. and H. B. Smith of United Motors Service. After taking a technical course with a well-known mail order college we'll try to write an engineering description of the contraption.

"Smileage" is the name of a new book. It's a "noble" piece of literature. That's to be expected when one considers that the author was none other than His Excellency, Cliff Knoble, *A.D.O.A.C.C. Subjects automotive are treated in such a manner that they fairly crack with humor. Our advice to you is that you send one buck to the Bonneyscott Book House, 409 E. Jefferson Avenue, Detroit, and get a copy.

*Assistant director of advertising, Chrysler Corp.

When it comes to telling the public about the "Flying Cloud," H. T. DeHart believes in getting up in the air. That no doubt accounts for the decision of the Reo Motor Car Co. to send 350,000 letters in a single batch of air mail to tell the story of Reo. It'll take 18 airplanes to move the consignment, which will weigh ten tons. The postage bill will cost Reo \$16,000 and it will be the largest single movement of airmail in the history of aviation.

Men who helped the old Durant-Dort Carriage Co. to blaze the way back in buggy days, return to Flint every year and hold a reunion. Among those who now occupy important niches in the automotive industry who were on hand for this year's function were C. W. Nash, president of the Nash Motors Co., Dave Averill, manager of the Nash factories at Racine, and J. D. Mansfield, general manager of Chrysler of Canada, at Windsor, Ont. A great time was had by all reminiscing over old times.

The new Buicks have given A. Brown Batterson such an itching for speed that he drove into Detroit the other afternoon and placed an order for an eight-cylinder, 110-horsepower speed boat. The craft will be placed on Long Lake, near Flint, where the Batterson's rusticate for the summer and no doubt A. Brown will startle the natives such as they have never been startled before.

at General Motors building, September 1, under the supervision of W. G. Langdon, who becomes director of sales of automotive parts for this company. R. H. Wallace is director of manufacturing and engineering.

Greenfield T. & D. Gains

GREENFIELD, MASS., Aug. 24—Greenfield Tap & Die Corp. is enjoying a busy season with an increased business being done in equipment for automobile maintenance. The new No. 12 hydromatic machine is a factor in increasing sales, and an improved business is reported in taps, dies, twist drills, reamers and gages.

Otis Motor Co. Takes De Soto

PORTLAND, ORE., Aug. 28—Roy Otis Motor Co. will distribute the new De Soto car. The firm is composed of A. E. (Roy) Otis, Portland capitalist, president; Frank Elliott, veteran automotive executive, vice-president and general manager, and G. A. Pearson formerly of Everett, Wash., as secretary-treasurer. Attractive headquarters have been opened at Eighteenth and Alder.

Noyes-Huff Join DeLay

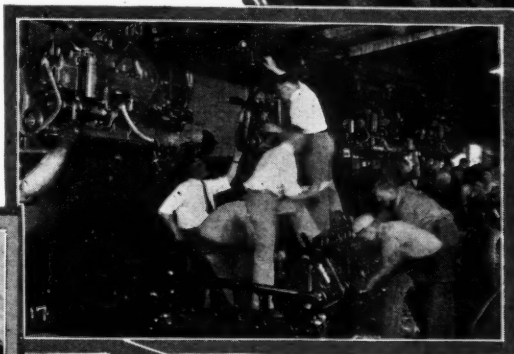
PORTLAND, ORE., Aug. 27—Associated with W. R. DeLay, Inc., distributor of Willys-Overland, are A. L. Noyes as secretary and H. R. Huff, vice-president.

A Super-Test

A general view of the Atlantic City Speedway is shown at right. Here four strictly stock Studebaker Presidents each traveled 30,000 miles at better than mile-a-minute average speed, between July 21 and August 9. It was a feat of endurance and stamina unparalleled in motor car history. Night and day, in fair weather and foul, the cars churned around the huge bowl without serious mishap



Below are the electrically operated timing devices which checked the speed of the four cars on their 30,000-mile run. Each time a car passed the checker's stand it tripped an electric timing tape stretched across the track



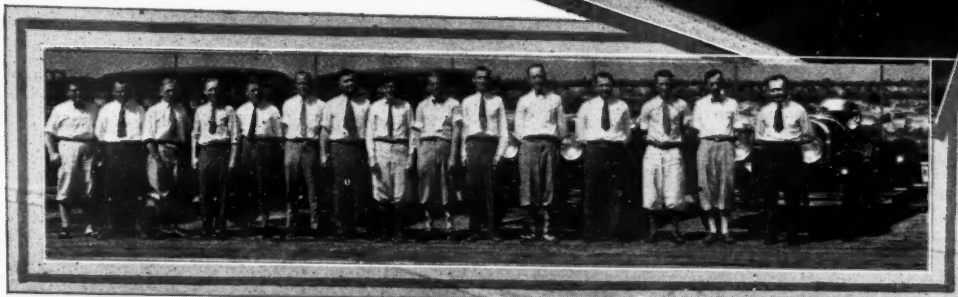
Members of the A.A.A. technical committee may be seen at left selecting stock President Eight engines from the Studebaker factory assembly line. The engines chosen were used in the endurance test. Vital parts of the engines are sealed so that tampering cannot go undetected



Right: A stop at the pit for gasoline, oil and water. Freddy Winnai, well-known race driver, is at the wheel. With every minute lost by a stop, meaning a sacrifice of more than a mile in distance, the mechanical staff made it a prime duty to save valuable seconds



Below is the group of officials of the American Automobile Association which sanctioned and supervised the Studebaker 30,000-mile run



Can the Dealer Make Independent Salvaging Pay?

*Wroten-Hundley of San Antonio Has Done
Its Own Junking for Three Years and
Come Out With a Profit*

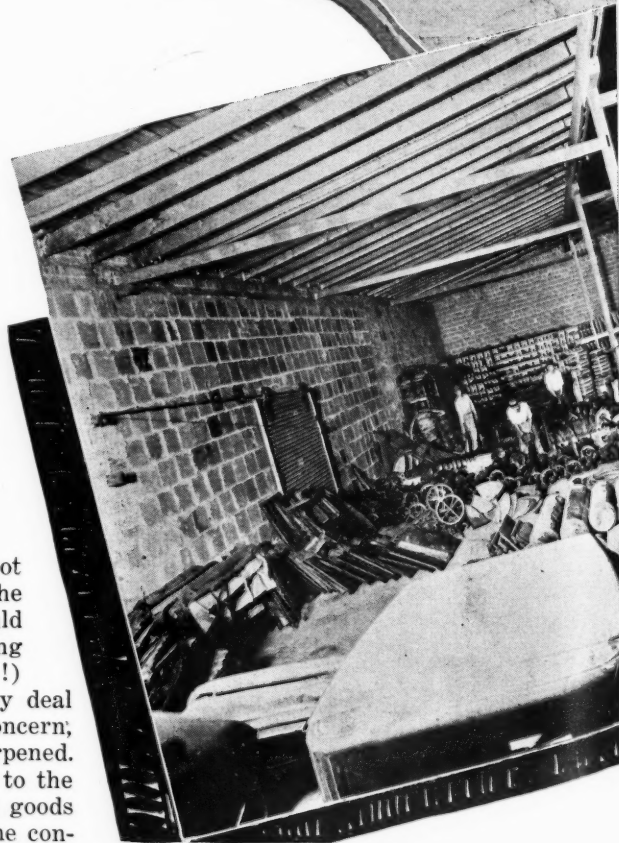
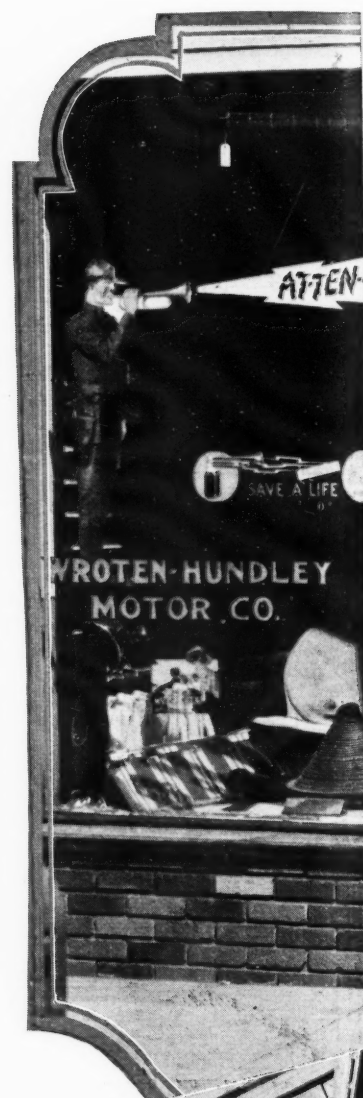
By Charles B. Hanavan

*(Used-Car Manager, Wroten-Hundley Motor Co.,
San Antonio, Tex.)*

MONEY in salvage? Well, not a great deal of it, but we are more than breaking even with our salvage department, which we started about three years ago, running it in connection with our used car department.

Theoretically, it looks like a dealer's used car department could make handsome profits from the junking of old cars and selling the parts. Independent used parts concerns, some of which are known to make big money in buying and wrecking cars, might be cited as examples to prove this theory.

Practically, it is not so easy to make a dealer's salvage department even break even. At all times the used parts sales must be kept on a high plane of consumer satisfaction. It will not do to allow the dealership to achieve the reputation of being a "gyp" through the machinations of its used parts distribution. Some independent car-wrecking and used parts selling concerns are white and aboveboard in all their dealings, of course, but perhaps the public does not expect as high a degree of business integrity from even the better of such establishments as it has come to believe should obtain in a dealership handling new cars. There is something of the old Latin proverb, *caveat emptor* (Let the public beware!) attitude in the mind of most used parts consumers when they deal with an independent junk concern. When patronizing such a concern, they expect to be bamboozled if they don't keep their wits sharpened. *Mercator*, the old Latin word for "merchant," meant "robber" to the Romans, and perhaps this meaning in regard to second-hand goods men is too generally held by the public today. But these same con-





Charles B. Hanavan, at left, used-car manager of Wrotten-Hundley Motor Co., and John R. Stuart, parts manager, the two men directly responsible for the success of the salvage department of the Wrotten-Hundley company

dealer. The independent junk concerns buy cars at a much lower figure than can the franchise dealer who takes his car in on new car trades.

A few figures will give an idea of results we have attained with our salvage department. We started the salvage department in June of 1925. Up to June 1 of this year we salvaged 140 Dodge used cars. The average cost of the cars was \$65, and it required about \$20 per car to disassemble them, wash the parts and place them in their respective bins and compartments in our salvage wareroom. During this time we have sold \$12,500 worth of used parts. A book inventory of used parts that we have on hand now shows about \$1,000 worth. A simple multiplication of 140 by \$85, the average purchase price plus the cost of disassembling, and then subtracting this total from \$13,500, the used parts sales plus our present inventory of parts on hand, will show that we are running ahead of the game to the tune of about \$1,600.

So here is a numerical answer to the question: Can a dealer salvage department run over a period of years and pay its own way? Ours has run for three years and come out with real profits.

However, the picture of profits was not the main, (Turn to page 34, please)

sumers hold that a new car dealer should be fair in his selling methods, that he should offer his goods at a fair price and stand back of them in many cases.

There is another reason, too, why less real money is to be expected by the

Above: This view shows part of the salvage department of the Wrotten-Hundley Motor Co., Dodge dealer of San Antonio, Tex. This is in the company's warehouse

Three Different

*And All of Them Help to Explain the
Success of Nevelow Bros., Tire and
Accessory Merchants of
San Antonio*

By A. W. Roe

SAY, are your driving up to Georgetown? Just let me slip this spare on your rear rack."

"No, I don't want to buy a spare tire today."

"Don't have to buy it, sir. Just take it along for emergency use. If you spring a leak and need it, why use it. If you don't need it, bring it back. We'll check it in, and you will owe us nothing."

The customer lights a new cigar and settles back comfortably while the salesman hitches on the spare tire.

Perhaps the close-up, just given, is one reason why Nevelow Bros., tire and accessory merchants in San Antonio, Tex., have been able to expand from a \$300 capital in 1918 to the satisfactory proportions of a half million dollar volume last year.

"So you trade at Nevelow's?"

"Yes, I do," replied an attractive young school marm of San Antonio schools, who owns and drives her own car. "I don't exactly know the reason why. It may be because they are so courteous. They never press you to buy. Instead they just show you what they have, and they have a good deal. If the item they are showing you is too steep for a teacher's slender income, they'll trot out a cheaper one. They seem to have something to fit everybody's purse."

Variety is a glove that fits many hands.

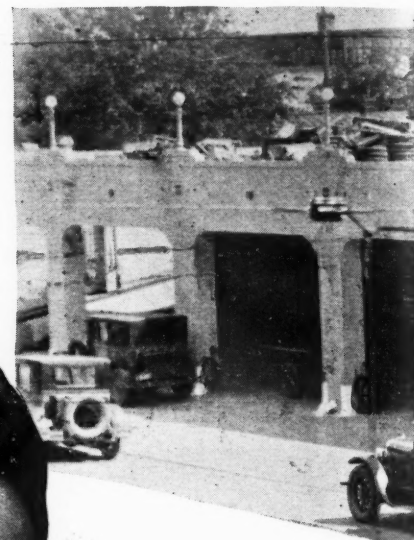
And perhaps this is another reason why Nevelow Bros. were able recently to build and equip a new tire and accessory store, costing in the neighborhood of \$200,000.

We have just illustrated two different meanings of service. Here is a third one.

"Service is, as you may have heard before, one of the most used and most abused words in our language," said I. Nevelow, general manager, in explanation of the success that his organization has attained. "To me service means speed. Of course, we believe in quality products, but other merchants sell good tires and accessories. We never aim to keep a customer waiting. If he or she (and a big percentage of our customers are women), so desires, we carry the commodity specified out to them. At our drive-in stations, our salesmen meet the cars as they turn into the drives unless they are busy with a customer inside the salesroom. And



I. Nevelow, general manager of Nevelow Bros., San Antonio, Tex., who has definite ideas about productive service



at our curb stores, we give curb service just as the ice cream stores do."

"Yes, service is speed," Mr. Nevelow continued. "And to us speed means three things. Speed means location. Speed means equipment. And speed means intelligent salesmanship."

"We have five stores, each rendering somewhat different types of service and having varying types of accessories and variety

of inventory. The location of the station determines largely the kind of service and the kind of merchandise we offer at the particular place.

"Our Broadway store is, of course, the largest and the most complete, and we have made this new plant so because of its strategic location. As you can see, there is a continuous stream of traffic along this thoroughfare, and we are located only four blocks from where Broadway crosses Houston Street, the main retail center. In choosing a site for this new plant, we selected this as being as near Houston as we could get and at the same time secure enough ground area to put in a big drive-in station."

"You will find a branch of a tire and accessory chain organization down the street just one block off Houston, and if you go a few blocks farther out Broadway than we are located, you will find a retail store of one of the big mail order companies that has recently become one of our competitors. The chain store near Houston has no parking space; things bought have to be carted

Ideas of Service



A Nevelow Bros. store in San Antonio

away and installed by the customer.

"Now when we planned this new building, we worked on the theory that the woman of the house buys most of the accessories and auto equipment today. And we believed that she likes to see the equipment on her car before she actually makes a purchase. Now, do you see what I mean by saying that speed is location? It may be true that if you make a mousetrap better than the next fellow that the world will beat a path to your door to buy your product. But we are not selling mousetraps; we are selling units of merchandise in a highly competitive area, as I have just indicated, the chain store being on one side and the mail order house on the other. It might be true that some people would beat a path to our door if we had located just off Broadway, but we didn't wish to take the chance.

"Not only does speed mean location, but in order for a retail business such as ours to be speedy in serving customers, it must have equipment. And by equipment, I mean a variety of inventory, too. An accessory store must have its merchandise so displayed that customers can see the items of merchandise, can take them in their hands and inspect them minutely. To make this possible, we have many open counters and tables in all our accessory stores. We believe in the best grade of counter equipment, and will soon have all steel tables and bin service in this new place.

"Equipment includes the stockrooms, which, as you see in this store, are placed just back of the main sales and display room. Thus they are readily accessible.

"We have more floor space here than is usually seen in an accessory salesroom in the Southwest, but we think that such extravagant use of floor area is justified.



Nevelow Bros.' salesmen never fail to make demonstrations. They know the good impression it creates upon customers

Broad main aisles and plenty of space between the counters and tables are worth the cost. Then extra room near the front gives us a chance to set up large units of display, as for instance, that tent and camping outfit that you see near the doorway.

"Equipment includes parking facilities to my mind. We utilize the main drive that runs down the entire side of the building here as a kind of outside salesroom. This drive is broad enough to permit cars being turned in and out at the pleasure of the driver. For crowded times, we also have access to our roof. We can take care of 150 parked cars at the same time.

"Speed, after all is said and done, means intelligent

THREE DIFFERENT IDEAS OF SERVICE

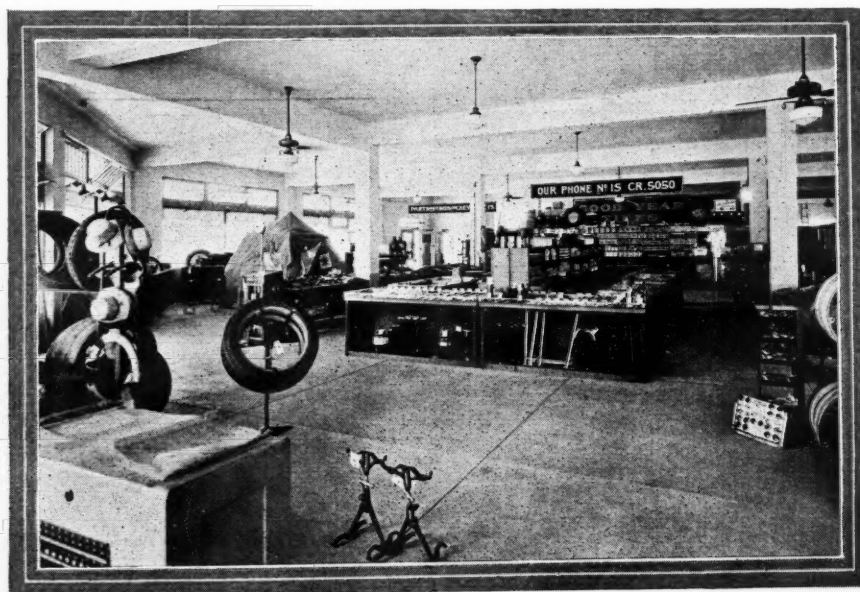
salesmanship. Our men are trained in the essentials of accessory selling. They know accessories themselves, know the strong talking points of each item and how to put in on a car and adjust it. We find that such knowledge and ability is more than half the game of making sales. In particular are women like the Missourian—they want to be shown. Once get the equipment on a woman's car, demonstrate it with skill and you have an easy job of closing the sale.

"Stunts? Yes, we are always seeking for new and novel ways of stimulating business," Mr. Nevelow said. "Dust cloths cost little to give away, and we have found them effective in building business for new-car owners. Previous to the first of this year, we had noticed a dropping off in new-car-owner business. New cars now come from the factory completely equipped or very nearly so, and we found it almost impossible to get any accessory trade from new-car owners until at least 12 months, time had turned the new-car owner into an old-car owner.

"In solving the problem we figured out a novel stunt. When a man buys a new car in San Antonio or vicinity, we get his name from the state highway registration files and send him a letter, congratulating him upon his new possession and inviting him into our store. We enclose a card, which when presented at one of our stores, entitles him to a Nevelow dust cloth. This stunt has absolutely turned the trick. We will give away approximately 10,000 dust cloths in 1928. This item seems to be greatly appreciated by the car owners and has enabled us to keep a follow-up system on them for seat covers, step plates, new tires, etc."

"Women are the main props of any mail order or accessory business," Mr. Nevelow continued. "They are the penny pinchers, the bargain hunters. It is they who have built such corporations as Woolworth's. We make special efforts to please them. We always address our dust-cloth letter, for instance, to the Mrs. of the household, and it is invariably she who brings the card down for the gift."

Credit for a big slice of the yearly volume at Nevelow's is given to mail orders. The firm has for several years issued an attractively illustrated catalog that advertises a complete line of tire and accessory goods. Goods are sold on a guarantee. Orders are filled the same day received. The catalog is mailed to car owners within a 150-mile radius of San Antonio. Not only does business result directly from the catalog



Availability of stock for customers inspection is a prime Nevelow merchandising principle, which is well illustrated by this partial view of one of the salesrooms

through orders, but the booklet is known to bring people into the Nevelow stores to shop when they come to San Antonio. The catalog is also mailed to San Antonio residents, and serves to draw them to the Nevelow stores.

Cleanliness may not be next to godliness, but Nevelow Bros. thinks it is. Cleanliness of floors, drives and windows and tidiness of counters and display tables

are two of the main plant objectives. Tidy displays on counters are found everywhere about the accessory salesrooms. And these displays are rearranged several times a day by salesmen after customers have handled them and left them somewhat out of line.

The 35 salesmen employed in the five different stores and stations are all required to be uniformed while on duty. The uniform sets a salesman off from other employees, and gives the customer confidence in approaching him. But it is usually the other way 'round at Nevelow's—the customer is more likely to be greeted first by the salesman than to have to tag someone to wait on him. Yet, this greeting is not officious; there is just present and running through the whole organization a big, hearty impulse to serve.

Nevelow Bros. uses comparatively little advertising. One 60-in. advertisement and smaller advertisements are run in the newspapers weekly. Billboards are used on the tops of the stores and salesrooms. The catalog, already described, is revised and mailed twice a year. Window display is considered very valuable, and windows are changed constantly, new trims being put in to show seasonable merchandise.

The organization is a partnership, including five brothers and J. M. Nevelow ("Dad"), the founder. All of the partners, including "Dad," work on the sales floors and about the drives. To each member of the firm is delegated some particular activity, and he carries it through very efficiently—incidentally setting a fine example for the employees directly responsible to him.

To expedite matters, the house telephone is installed in the main store on Broadway. This switchboard handles all messages to the other four branches. A battery of four telephones is located on the main sales floor of the Broadway salesroom.

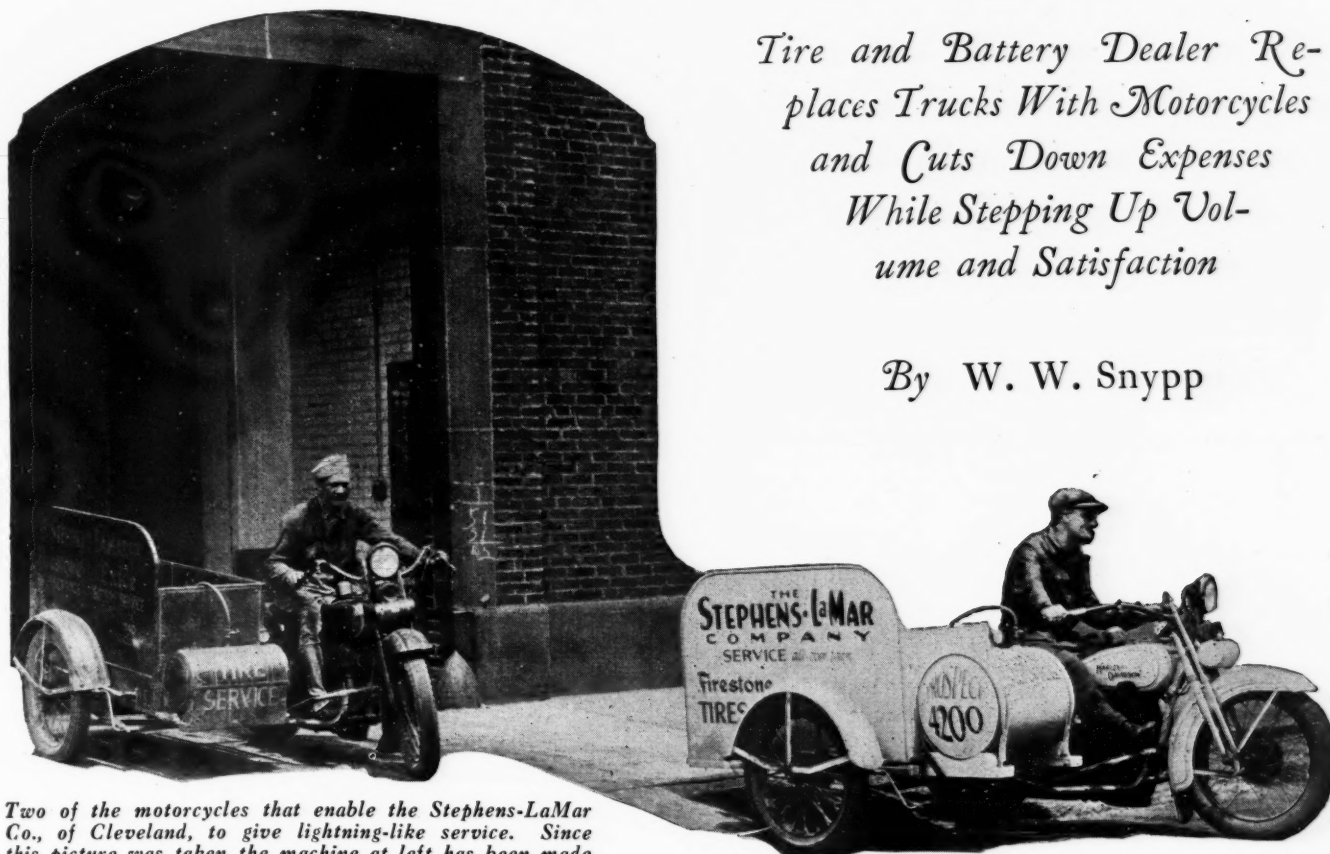
And so we have the story of another little business acorn that is rapidly growing into a wide-spreading oak. An ambition of Nevelow Bros. is to own a prominent store in the principal cities of Texas, and they are working toward an approximation of this ideal. The road is open to them and the going is good.

Speeding Up Service

With **SPEED**

Tire and Battery Dealer Replaces Trucks With Motorcycles and Cuts Down Expenses While Stepping Up Volume and Satisfaction

By W. W. Snypp



Two of the motorcycles that enable the Stephens-LaMar Co., of Cleveland, to give lightning-like service. Since this picture was taken the machine at left has been made to look like its neater companion

LAST year, L. A. Stephens, president of the Stephens-LaMar Company, battery and tire dealers of Cleveland, decided to try out the idea of using a motorcycle to speed up outside service. He bought just one, equipped with special side-car body, which was delivered in time to be put on the streets July 3, 1927. That was the Saturday before the Fourth of July.

Throughout the day not a truck stirred. Previously four trucks had been used: three light deliveries and a 1-ton. To do the same volume of tire business before—\$4,021 both inside and out—all four trucks had been kept going out of the two service stations maintained by the company.

"The single twin-cylinder motorcycle did it all," says L. A. Stephens.

"And that is why we are so completely sold on motorcycle service equipment that we expect to do away with our light delivery trucks entirely," Mr. Stephens continues. "One motorcycle does the work of two trucks and does it better. We can operate two motorcycles at two-thirds the cost of one light delivery truck of the type we have been using.

"Our second motorcycle, which we have just put in service, is the same type as the first, known as a truck model, capable of carrying 800 lb. Like the first, it cost \$480. The third one we are putting on the street-

within the next couple months. With its appearance, we will get rid of our light delivery trucks for which we have had very little use since last summer.

"We have to keep the 1-ton truck, of course, for our truck tire business. Through a careful check of costs and time required to make service calls and deliveries, over a period of eight months, we are confident that with three motorcycles we will be able to do everything else; in fact twice the amount that was possible with the three light delivery trucks.

"Another feature that appeals to us is that they are fast enough and easy enough to handle in traffic that we are able to operate all of them out of our main service station, instead of having to carry on a part of our outside service from the other station, as was necessary with the trucks."

The side-car body which was made to fit the Stephens-LaMar Company's special needs—to give both tire and battery service—is 2 ft. wide, 5 ft. long, 2 ft. deep inside and 3 ft. outside. The whole body is 6 ft. long overall, that, is, including the air tank in front. It weighs 250 lb.

Mr. Stephens is making a change in the size of the air tank used on the first motorcycle from 18 in. long to 30 in., which will give this motorcycle an air supply

(Turn to page 38, please)

The Tactless Retailer Turneth Away Jack

Lack of Experience and Lack of Capital Cause Many Business Failures But There is Reason to Believe That Lack of Courtesy Adds Many More Names to the Mortality List

By SHERMAN SWIFT

THE prevailing belief appears to be that lack of experience is about equally responsible with lack of capital for the average dealer failure. That may be a satisfactory enough finding for the person who casually looks into the situation and is satisfied with any answer that sounds at all logical. The writer is willing to concede that the two factors are probably responsible in great measure, but a somewhat more than cursory study of the situation, ranging over a period of years, leads to the belief that in the automotive establishment where a large amount of the total business is accounted for by the sale of labor, the lack of courteous customer contact has had more to do with failure than has lack of capital or experience.

We have in mind the type of dealer who, having worked at the business in one department or another, gathers together a reasonable sum of money, enough to start him off on the right foot, with a shop and a fair amount of equipment. These, it is recorded, fail far oftener than they should and while lack of capital or experience may be adduced as the general cause of failure, the writer believes that the element most often lacking is the common-sense necessary to contact with the customer on a basis that will make him want to do business with the establishment and to send his friends to it for their automotive needs. Call it lack of tact if you like; it is as often apt to be a plain lack of courtesy.

Not because it is easier, but because it is more effective illustration to recite specific cases in point than merely to editorialize, let us review a few examples known to the writer where lack of courtesy and nothing else has caused automotive establishments to fail.

Here is one case. A mechanic—a mighty good one when he was working for someone else—came into possession of a relatively large amount of money in the only way that so many of us ever get any considerable sum at one time: he inherited it. Immediately

Courtesy

It's age guid to be cruel, as the auld wife said when she bekked (curtseyed) to the devil.—Scottish Proverb.

he built a garage. It was as good as any in town, with a finely appointed repair shop and a car-washing outfit. He had a battery of gas pumps that would do credit to one of the big companies and a half-dozen cars could be serviced at one time with fuel, oil and water. He had the half-dozen to service too—when he first entered the business—but in one year he was working for the man who bought him out. What was the answer?

Here is one conversation that was heard by the writer. A lawyer, socially prominent, came to get his car. He had left it there an hour before to get a tire repaired. The bill was \$2.25.

"What's the extra charge for?" the lawyer wanted to know. "There was merely a puncture to be fixed." "I'll call the boss," said the helper.

The boss appeared. He shambled in with a dead cigar clutched in one corner of his mouth. Not a word of greeting, though he stood within 4 ft. of the customer. "What's he want?" he asked the helper.

"Want's to know how come we charged him \$2.25 for the job."

The proprietor shifted his cigar and spat. Then he turned to the car owner. "What's 'e idear?" he asked, morosely.

The lawyer explained that the tire was not flat when he ran the car into the shop. He had noticed the leak and before the shoe had become deflated had gotten it to the service station.

"Well," observed the shop owner, "what about it?"

"What I want to know is whether you do or do not charge \$2.25 to fix a single puncture." The lawyer was getting impatient.

"No, we don't charge \$2.25 to fix a puncture," sneered the owner, "but there was a crack on the inside of the shoe and that's 75 cents for a patch."

The car owner tried to explain that there must have been a mistake. The tire, he said, was practically new and had never been run flat.



The proprietor shifted his cigar, spat and turned to the car owner. "What's 'e idear?" he asked, morosely

A somewhat trying situation, perhaps, but a person possessed of ordinary tact could have explained that the crack might have come from crossing a railroad track, that the shoe was so good that he took it on himself to fix it up so that it would deliver its full mileage. Not this shop owner. He immediately wanted to know—in a loud voice—if the lawyer thought he was a crook; he'd been in business too long to go 'round gypping people, etc.

The lawyer was through long before he was. He paid his bill and left. He never came back; neither did any of his friends. And he had many of them; at the country club for one place where he told the

story to the group at the nineteenth hole.

Another case. The dealer referred to here is still making a rather sketchy living from the business; he hasn't failed, but he's like the man in the story who was dead but too lazy to lie down. He formerly had what was conceded generally to be the best stand in the town in which the writer lives. Now he has a shed, down an alley. If he's worked on a car of later model than 1920 during the past year, the writer does not know it.

In this instance the incident had its inception when a woman left a car for a minor repair. When she returned for it she went around the back way as she had been told to do. She started up the incline to the shop. A voice greeted her with, "Hey, git the hell off that runaway, will yuh?"

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A Factory Executive foresees a Change in Methods and Problems of

By
NORMAN G.
SHIDLE

(Directing Editor, Chilton Class
Journal Co.)

MANAGEMENT

"THE men who are running the automobile industry today will have to study business economics and merchandising theories in a fundamental—even an academic—way if they are going to continue to be factors in the developments of tomorrow. The automobile industry has a lot to learn from other lines of trade, particularly as regards merchandising and marketing methods and practices. Maybe plain mental laziness is the real reason, more often than we like to admit, for our insistence that our problems are different and that we can't learn anything from others."

This critique of automotive management didn't come from a college professor, from a merchandising counselor or from the dean of a school of business. It came in calm, measured tones from a man whose entire background has been definitely practical rather than theoretical in character. It came as one of a number of graphic comments about management problems in an interview with James David Mooney, president, General Motors Export Co., and vice-president in charge of export division, General Motors Corp.

Mr. Mooney's thoughts about management needs have particular significance because in his organization, with 22 subsidiary companies covering every part of the world, all of the ordinary domestic problems of management are present but are intensified three and four-fold. The necessity of getting a plan or program understood throughout the executive organization before it can be in efficient operation; the need for proper adjustment of given men to given jobs; the obligation to prejudge market trends and business potentialities—all of these management problems, difficult enough in the more centralized domestic organizations, arise in vivid and animated form in an export company such as that which Mr. Mooney heads.

And his ability to administer such an organization successfully is best visualized not merely by the constant increase in yearly sales volume since his taking charge, but rather by the rising tide of net profits during the same period. Here is a combination of advances eagerly sought for but infrequently attained by domestic companies in the last decade.

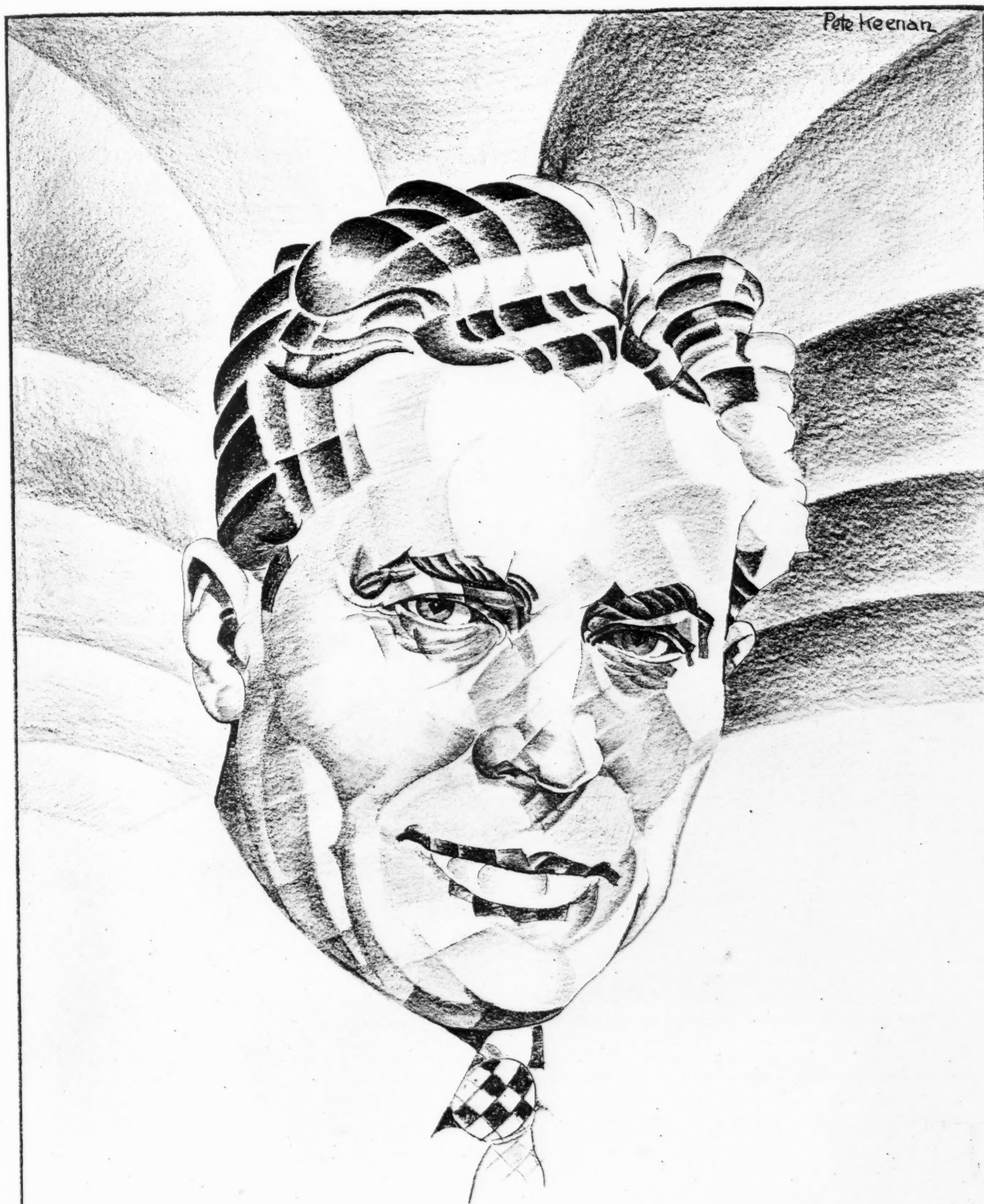
Q *J. D. Mooney, President of General Motors Export Co., Says Successful Automotive Executive of the Future Will Have to Banish the Idea That Production is the Basis of His Scheme of Things and Come to Regard Markets, Demand for Products and Possibilities for Developing Greater Use of His Products as the Actual Basis of His Calculations*



"I sometimes think," Mr. Mooney said, "that we automotive men have had it too easy. We tend to get soft like a heavyweight champion who fights only once every year or two. When a battle does come along, then, we are a bit too prone to blame our troubles on some outside factors, rather than on the lack of continuous and grueling mental effort which, down in our hearts, we know is essential if we are to continue our forward march. A flabby mind is going to mean business retrogression in this automotive field from now on just as surely as flabby muscles mean a start on the down grade for a pugilist."

"Trouble is it hasn't always been that way in our industry. The raspberries have always grown very, very plentifully in the automotive patch. Some of us who are automotive executives don't know what work is compared to executives in other and older industries. We have been able to pick several bushels of raspberries in the automotive patch with about the same amount of effort needed to fill a quart pail in some other fields. We keep rolling up statistics and profit figures, often without knowing how we got them or why they accrued."

(Turn to page 36, please)



A MOTOR AGE IMPRESSION=J.D. MOONEY
President-General Motors Export Co.

A Seven-Sided

*Seattle Battery
Sales by
to Sev*

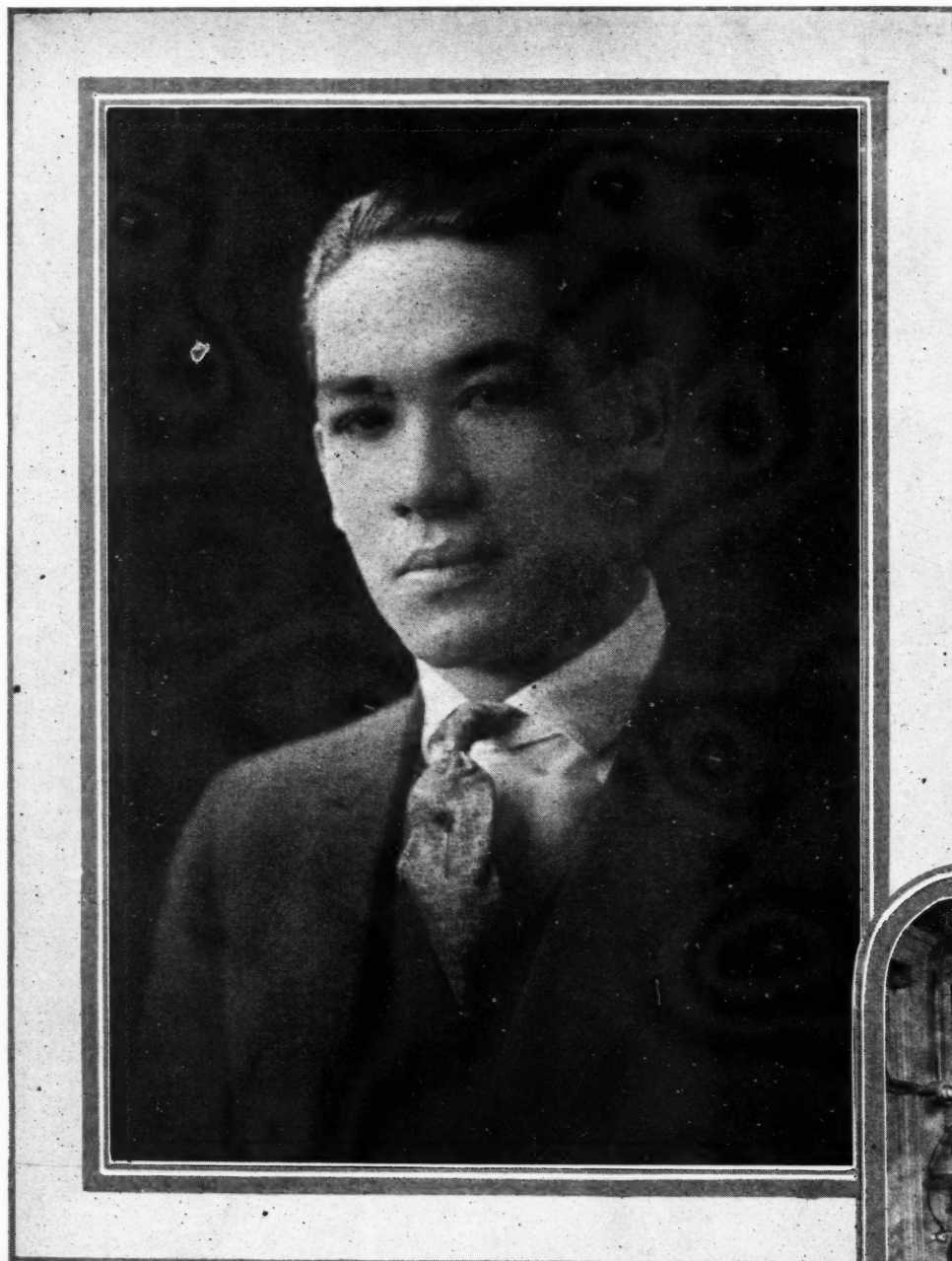
*By
Dewey
F.*

Gearhart

*Assistant Manager,
Harper-McGee Bat-
tery & Electrical
Co., Seattle*

completed battery, but an array of disassembled parts and the news that what I needed was a new battery.

"Now a man would have said 'all right, guess I have to have it,' and so on. But being a woman—and with a



THE dictionary is woefully inadequate when it comes to defining the word "selling," as applied to selling of batteries. And the cash register isn't always the best measuring stick of results.

To begin with, we find that 50 per cent of our battery sales and service is transacted with women—purchasing agents of the modern family, even in automotive lines. In the light of this ratio, I was extremely interested in a story which a woman patron related to our general manager, H. W. Graham.

"It was in May of last year, and I was all budgeted and ready for the vacation financial strain," she related. "Then one day I dropped into a battery shop, and left our radio battery for repair. I said that I would call back for it, and on the appointed day I found, not my

Above: Dewey F. Gearhart four years ago won a watch in a contest sponsored by the Willard Storage Battery Co. He still has the watch and his prize-winning views of battery selling

Right: Battery shop methods are all in the day's work to the shop workers, but to the battery buyers they reveal an interesting story.



Selling System

Store Successfully Builds Having Staff Adhere to Sellisms

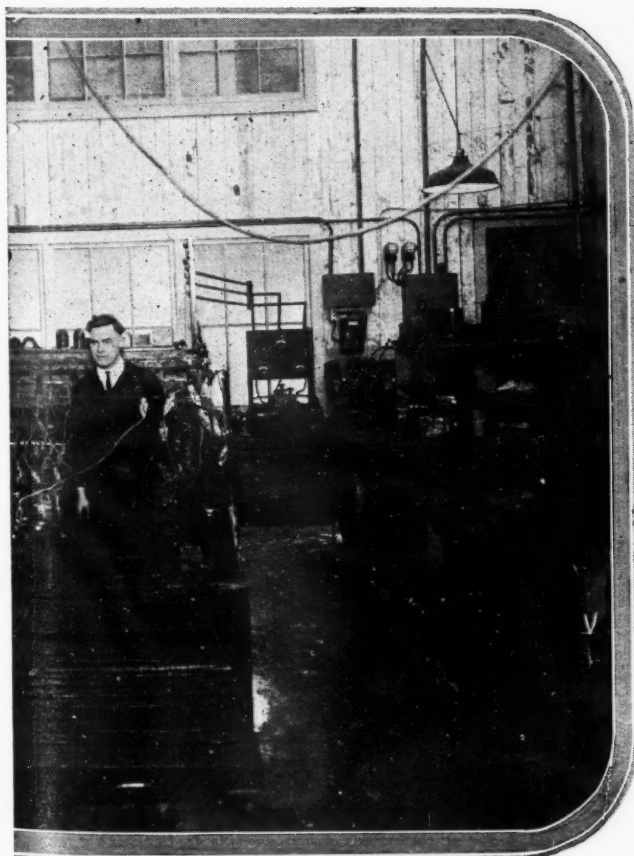
budget complex—I told that man that such information should have been handed out in the first place, that I didn't wish to buy a new battery at the moment, nor did I like his business methods.

"I've never been back to that shop, either, probably because I like the way you folks work on the estimate plan. I don't buy a dozen of oranges without asking the price; why should I exercise less purchasing judgment when I purchase a battery?"

It is true that woman doesn't buy a dozen of oranges without asking the price, and equally true that she likes to know "what's what" when her car or radio battery needs repairing.

Our rule in this regard is inflexible. If the customer, either masculine or feminine, cannot wait the 10 minutes required to make a test of the battery, we never proceed with repairing until we get in touch with the individual by telephone, when we report our findings, make our recommendations, and so on.

We take our customers right back to the battery shop, where they may watch testing operations through a wall opening that resembles a cashier's wicket, but minus obstructing wires. Here they take a great deal



The Seven Successful Battery Sellisms

- 1 Satisfying the repair job customer.
- 2 Playing up shop facilities to patrons.
- 3 Knowing *when* to push a quality battery.
- 4 Knowing *how* to push it.
- 5 Keeping battery selling concentrated in one individual, and thus reducing the problem of sales management.
- 6 Instilling among the service men a mental attitude of selling toward "free service."
- 7 Adopting the "floor manager" tactics of retail institutions.

of interest in watching the workman drill the top connections off at the electric drill, and then use the rapid steamer to soften the sealing compound. Mrs. Customer, in particular, is not left to wonder about the various operations. The workman does some "institutional advertising" for the house, explaining how each cell is tested individually on the discharge set, etc.

Some one might advance the argument here that a battery shop is not a lovely place, at best, so that it would be better to transact this business on some more advantageous place on the service floor, say, the customer's running board. We have found this situation just the reverse. While our battery unit is not a wickered lounge by any means, it does contain an interesting story of methods and procedure for the battery buyer.

I think that usually battery sales are resolved down to these three divisions: you either sell the customer a repair job, or a quality battery, or a cheap one. When the battery is worth a repair job, we always sell that; if the cost of repair mounts too near the new battery price line, one of the remaining two selling transactions is consummated.

As we look at it here, our first job is to discover the purpose in the mind of the prospect. If he intends to trade in his automobile within a short period, the cheaper battery is the economical and practical buy for him. If he is planning on "getting the life" out of his automobile, quality is the trend of the selling story. And actually, it's just as easy to sell a quality battery as it is a cheaper one, in spite of a broad span of dollars and cents in between.

To accomplish this, the first requisite is that the salesman must be thoroughly sold on his quality product, so much so *that he never forgets it*. Just the other day a customer drove off our service floor with the best

A SEVEN-SIDED SELLING SYSTEM

quality battery in the house, yet at the beginning of the interview she countered negatively: "But, I can buy a so-and-so battery for so-and-so less than you quoted me."

Instead of backing down and pushing the less expensive battery in our line, we responded: "Probably so. I wouldn't argue that point with you for a moment. The so-and-so shop is better qualified than I am to tell you exactly *what their goods are worth*. And they *have* told you."

Figuring out how little the quality battery costs by the year, by the week, or by the day, always proves effective in an emergency, because it enables the buyer to see the price in its true perspective. Instead of thinking only of the first cost, which must be laid out at once, the buyer is led to weigh the advantages to be gained over the long period against the outlay, if divided into the same units as his enjoyment of the service will be divided.

We do not have the problem of training service men in our selling methods, for all battery selling is done directly by myself. However, to the service men falls the service end of selling, just as vital. We try to give our customers true "service" by adhering to the Willard 5-point service plan—and then something in addition. Our men are trained to recognize that when a customer is accorded efficient battery service, and he drives out satisfied, a sale is accomplished whether there is an addition to the cash register tape or not. We believe in this fruitful mental attitude—the men regard themselves as *service salesmen*. It is one thing to render battery service without charge because it is a custom of the trade—couldn't charge for it if you wanted to—and quite another to regard each free battery test as the best kind of sales promotion.

In selling batteries—or battery service—we aim to use the same methods you find in retail institutions. Madame visiting her beauty shop is greeted cordially and told to have a chair, the operator will be ready for her in just a moment, etc. And when you go in to purchase your spring suit, the enterprising floor manager doesn't leave you stranded among the sweaters out in front.

With 500 automobiles passing over our service floor daily, it follows that we cannot give instantaneous service to every customer, particularly during rush hours. Yet every customer *does* get immediate recognition when he or she drives on the floor. We try to match names with personalities, just as they teach clerks in retail institutions, so that the greeting runs something like this: "How do you do, Miss Jones. A battery test today? I'll have a man with you in a very few minutes." Just a little thing in courteous salesology, but one that we find productive. Also, this kind of selling particularly appeals to the feminine motorist.

Summing up our plan of battery salesology, I believe it runs in these seven channels:

1. Satisfying the repair job customer.
2. Playing up shop facilities to patrons.
3. Knowing *when* to push a quality battery.
4. Knowing *how* to push it.
5. Keeping battery selling concentrated in one individual, and thus reducing the problem of sales management.
6. Instilling among the service men a mental attitude of selling toward "free service."
7. Adopting the "floor manager" tactics of retail institutions.

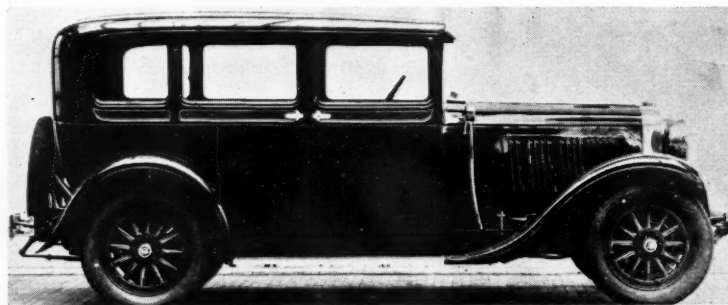
Wasn't I right—calling the Webster definition of "selling" inadequate?

Longer Bodies for Dodge Victory Six Line

WHILE no official announcement has heretofore been made, several changes were incorporated a short time ago on the Dodge Victory Six bodies. These consisted in the provision of additional leg and head room and the improved appearance of the body molding treatment.

The bodies themselves are from 2 to 4 in. longer than formerly, this change having been effected without changing the wheelbase. At the same time the roof has been raised an average of 2 in. in the four-door sedan and 1½ in. in the brougham and other models. Cushions and seat backs are also said to be deeper than formerly for increased comfort. Sedan doors are approximately 3 in. wider than formerly. With these changes vision has been improved by a considerable increase in glass area.

Exterior finish has been improved by the adoption of



Dodge Victory Six Sedan with large body

a distinctive wide belt stripe along the body and door panels, terminating in a slight upward curve at the front and rear. A double pin-striping was formerly used.

Announcement of New Senior Six models by Dodge Brothers is expected to be made within a few days, according to re-

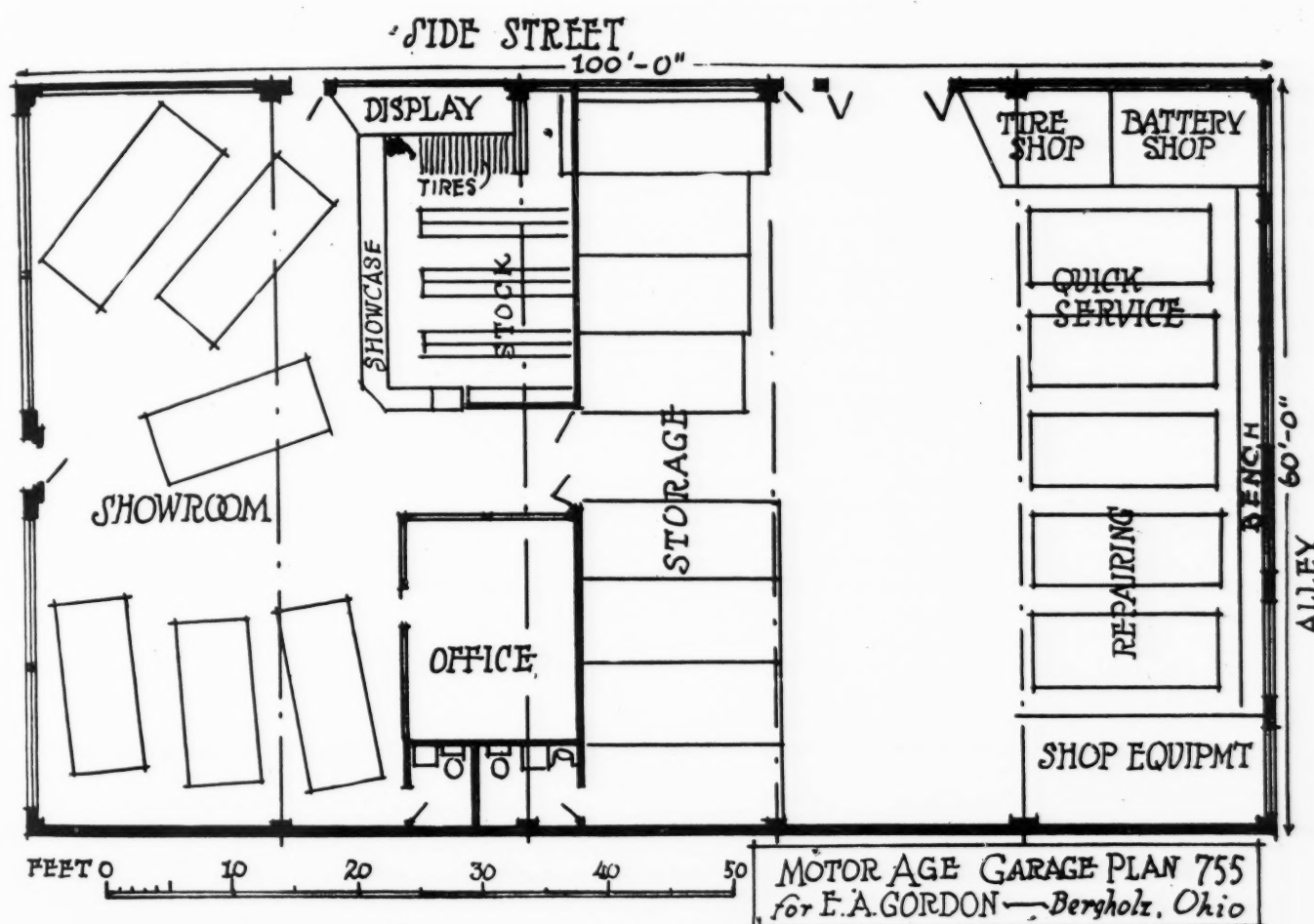
ports. Factory production is being pushed on overtime schedules to supply dealers over the country as rapidly as possible.

The Senior, to be offered in varied body styles, represents advanced engineering design that stamps the car with an individual appearance. Interior appointments of the car carry out additional improvements. Finishing of the instrument panel is harmonized with the upholstery and coach work in a most unique manner.

The car will be powered with an engine designed and built especially for the Senior Six.

A Good Standard Dealer Layout

By Tom Wilder



THIS is a very fine lot for a dealership such as you propose. If the location is right, the conditions are just about ideal. It is not large enough to permit a drive-in filling station, however, without sacrificing more of the showroom or the garage than would be advisable, but since you do not mention a drive-in station it is assumed you will use curb pumps for the sale of gasoline. If the side street is well traveled, one pump should be in front of the accessory display window. If the side street is dead and all the traffic is in front, a rearrangement of the accessory and parts store and the office would be better. The store would be along the side wall of the showroom with a display window

I AM planning a new building and would like to have you help me in regard to plans and suggestions. I have a corner lot 60 x 100 ft., with back alley. I sell gasoline, oil, tires, accessories, charge batteries and do general repairing. I want a showroom for about six new cars, but no storage space for used cars. I want to build with tile. Thanking you for any help you can give me.—E. A. Gordon Garage, Bergholz, Ohio.

in front and a doorway so that the gas pumps in front could be served by the accessory man or his assistant. The office would be either at the rear where the stock is shown or at the rear of the accessory counter, but at the side of the new stockroom.

The garage is well proportioned and if you are doing general repairing beside regular Studebaker work, the shop will not be too large. A greasing lift might be placed in one of the spaces serving for crankcase repairs as well as greasing. The width of the garage is

55 ft. which allows for a row of cars in storage and a good wide aisle. There would not be much gain in

(Turn to page 38, please)

CAN THE DEALER MAKE INDEPENDENT SALVAGING PAY?

(Continued from page 21)

but was, I may add, a minor reason why we established our salvage department.

The aims and purposes back of this department were at least three in number. First, back in 1925 when we started salvaging, we were accumulating quite an inventory of early model Dodge used cars. What to do with them was a puzzling question. Small garages and wrecking companies were also cluttering up the used car landscape, for they were featuring sale of questionable used

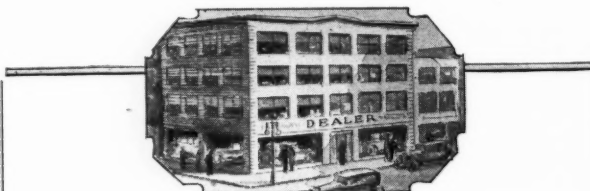
parts to Dodge owners of these early models and thus keeping them on the streets when they should have been pulled off to some junk yard. This competition cut into our parts department sales, and in addition to that we were interested in all Dodge Brothers motor cars being put on the streets in a safe and dependable condition. This was very often not the case when unscrupulous used car dealers either bought or traded for these cars, for many times they effected a resale without doing any reconditioning whatever, which, of course, endangered the lives and property of the public as well as of the hoaxed owners. Such a situation did not give the public the best impression of the line of cars we distribute.

Second, and incidentally, we figured that an up-and-going salvage department would relieve the used car department of having to spend more on certain used units than it would be possible to get out of them by resale on the used car market.

Third, we hoped to make our salvage department of direct aid to our sales department. This was accomplished in two ways which we thought we could foresee when it was installed. Since its inauguration we never refuse to make an offer on a Dodge Brothers used car, thus helping to facilitate new car sales. We can honestly say that in the three years we have had the department running a better tone in the Dodge used product has come about in San Antonio. This is, of course, favorably reflected in sales of new Dodge cars. The fact that we never put out a Dodge used car from our used car department that looks other than first class in every way has caused independent used-car establishments to perk up the appearance of their used cars of our make.

Possibly some details of our salvage operations might be of inspiration and value to others contemplating the installation of salvage departments, and so I am glad to pass them on for what they may be worth.

First, our department has been made possible and productive by the close, friendly cooperation of the used car department and the parts and accessory sales department. The credit for the department's being able to keep its head above the waterline goes to John R. Stuart, parts manager, because Mr. Stuart has had the task, at times a difficult one, of providing sales outlets for the used parts. Without his painstaking help, it would have been impossible for us to have made a financial success of the salvage end of the business. It would be impracticable for us to try to maintain sep-



WHILE the individual dealer can make a profit from an independently operated salvaging department, Mr. Hanavan willingly admits that the task is not an easy one. At all times, he says, the used-parts sales must be kept on a high plane of consumer satisfaction. It will not do to allow the dealership to achieve the reputation of being a "gyp" through the machinations of its used-parts distribution.

arate parts salesroom and force. The logical place for the selling of used parts is in the new parts sales department.

Our used parts outlet is divided pretty equally between what we use in reconditioning our used cars and in the service end and what we sell to associate dealerships, small garages and service stations.

In building up the business we have used newspaper advertising and have put out letters to garages and associate dealers. All parts and shop employees

are paid 10 per cent commission on all sales of used parts suggested by them. This practice proves a big incentive for the mechanic or parts salesman to go a little out of his way to suggest used parts, and particularly when customers complain of the high cost of new parts. We advertise used parts at one-half the price of new parts, though we deviate from this rule to some extent in the case of earlier model parts sometimes, and for later model parts we usually get a little more.

Our salvage business is run as a separate department. It is provided with its own accounting system, and a close check is kept upon both the buying and the selling ends, as well as upon all labor costs. The salvage department buys the cars to be disassembled from the used car department. They are taken at once to our salvage department, which occupies a space about 100 by 125 ft. in the rear of the company's warehouse. Rent runs entirely too high for us to have this department connected directly with our main plant on Broadway. We do not favor a wrecking yard such as some independents have. We like to keep all parts under a roof.

Cars are disassembled by employees from our used car department whenever business is slack enough for them to be transferred. At other times we secure outside help. We have racks, bins, etc., properly labeled, in the warehouse so that we can quickly get at any part desired. Only enough parts are kept in the Broadway parts salesroom to fill emergency demands.

In taking in used cars, we frequently find a car with an excellent motor perhaps, or with good radiator or fenders, etc., but so badly shot in other particulars as to make reconditioning a costly and farcical operation. Such cars we think it best to salvage. The motor itself often pays for the cost of the unit and the labor involved. Dodge motors in running shape bring us from \$50 to \$125. Dodge motors, reconditioned in our shop, sell at from \$150 to \$250.

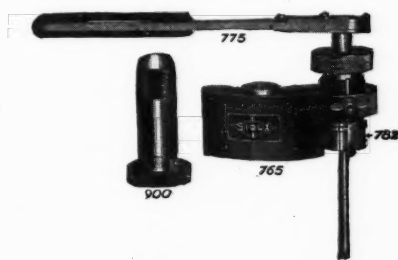
During the three years that we have operated the salvage department, we have withdrawn 140 used cars, in more or less hopeless condition, from street circulation. We have thereby made room for that many cars of our own or other makes.

In this discussion I have tried to bring out instructive points in our salvage practice. Not all cities can perfect a cooperative salvage plan such as Kansas City and other cities have. But as I see it, there is nothing to prevent any enterprising distributor or dealer from operating such a system as we have built up.

Useful Shop Equipment

Valve Renewer

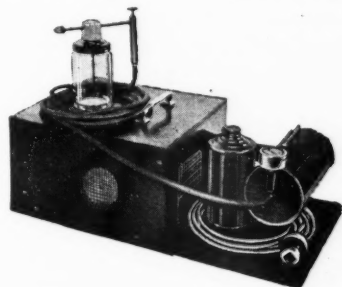
A VALVE renewing set designed particularly for servicing Fords, Chevrolets and other small cars, consists of the No. 765 fixture complete with the No. 782 cutter, one No. 900 driver, No. 775 ratchet wrench and one 5/16 pilot stem. This equipment has been developed by Albertson & Co. of Sioux City, Iowa, makers of the



well-known Sioux valve service tools. This set comes complete in a metal box and sells at \$25. By means of this equipment it is possible to save cylinder blocks which might otherwise have to be replaced with new ones, thus saving money for the customer and developing new service work for the shop.

Portable Electric Spray

AN improved portable electric spray gun is the latest addition to the products of the New Way Spray Gun Co., Inc., of Cleveland, Ohio. In this gun the air supply is furnished by means of a small air compressor driven by a 110-volt electric motor which drives the compressor through a chain of gears. This equipment operates the sprayer at a constant pressure of 12 to 15 lb. for ordinary painting require-

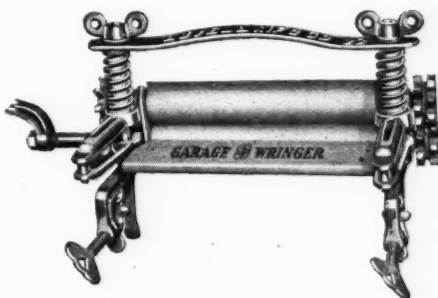


ments, but will develop a tank pressure of 45 to 50 lb. if required. The spray head and container weigh less than 1 lb. and the portable electric power unit weighs only 25 lb. This part can be placed away from the work while the sprayer is in operation. A tank in the air line assists in reducing condensation, thus helping to keep moisture out

of the spraying air. An automatic shut-off valve for instant control of the air pressure is supplied. A ventilating fan is mounted on the motor and a screen protects this unit so that it is both shielded from fumes and thoroughly ventilated. The regular equipment includes two sizes of adjusting the atomizing nozzles for use with heavy or light liquids, one-half pint glass container and one pint metal container. Larger containers of either kind can be used and are available. The retail price of this unit complete is \$37.50.

Wringer

THE wringer illustrated is especially designed for garage use in connection with car washing. It will be observed that the adjustable tension on the roll and the open construction, assure protection to chamois wrung by means of such rollers, and they are



freed of more dirt than when wrung by hand. They are also preserved to a great extent. In addition to the better wringing resulting from the use of this equipment there is a considerable saving in chamois expense. This wringer is made by the Lovell Mfg. Co. of Erie, Pa.

Drill Vise

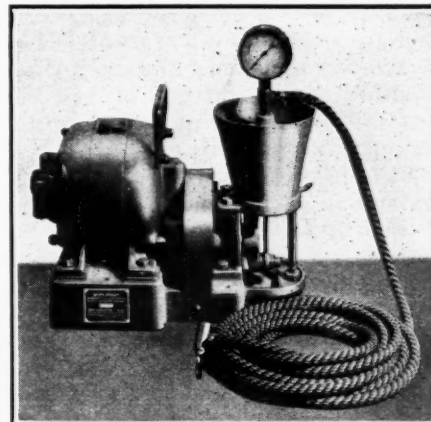
FOR the purpose of holding all sorts of irregular objects as well as regular ones, Demco, Inc., of 105-115 S. Calvert St., Baltimore, Md., has developed the Demco four-point drill press vise. The vise jaws are semi-steel and accurately machined on four sides. There are two V slots, one parallel to the top and the other at 90 deg. The Model 4 vise has a jaw of 4 in. and a maximum opening of 4 1/2 in. This weighs 13 lb. and sells for \$15. The Model 8 has a jaw width of 8 in., maximum opening of 8 1/2 in.; weighs 40 lb. and sells for \$25. All prices are f.o.b., Baltimore.

Pump and Spray

THE Mardo electric air pump and Mardo spray gun form a combination suitable for spraying paints and lacquers or inflating tires. The Mardo is a portable motor-driven air pump with a displacement of 1 1/2 cu. ft. per



minute, delivering compressed air at any pressure up to 75 lb. The construction is simple and the weight 40 lb. This unit goes into action immediately upon being plugged into any electric light socket. The Mardo spray gun, which is designed to operate in connection with the Mardo electric air pump, is of very simple construction and is particularly adapted to touching up repair work. The electric air pump complete for operation on 110-volt, 60-cycle current, sells for \$52. The spray



gun complete with 10 ft. of hose and air purifier, thumb lock connector, container and extra nozzle, sells for \$12. These products are made by Demco, Inc., 105-115 S. Calvert St., Baltimore, Md., who will be glad to send further details and descriptive literature on any of this equipment upon request.

PROBLEMS OF MANAGEMENT

(Continued from page 28)

We look at the balance sheet and wonder what it's all about.

"Those days are about past. The keen, aggressive, fit, well-trained mind is the only one that's going to be able to survive the next 20 years in this business.

"We are in something like a transition stage. Up until recently the executive positions of the industry were for the most part in the hands of the older men who built the business. Those men built a huge industry to a glorious success; their names and deeds will always illuminate the pages of automotive history. But they built under economic and market conditions quite different from those under which the industry must operate from now on. Gradually the picture is changing. At the end of another decade the second generation of automotive executives will be almost wholly in company control.

"And while striving to carry on successfully the fine tradition left to them by the pioneers who laid the foundations of our business during the first quarter of the twentieth century, it seems to me that, generally speaking, there is one fundamental difference in outlook, in approach to the management problem between those who have been successful in the past and those who are going to be successful in the future.

"The older type of executive has tended to approach his management problem primarily from the inside looking out. He has, subconsciously perhaps in many cases, seen production as the basis of his scheme of things, with merchandising as a means of disposing of the products of his manufacturing plant. His has been the subjective attitude in management, if you will.

"The successful automotive executive of the future, however, would seem to be under the necessity of taking an opposite viewpoint. He will have to regard markets, demand for products and possibilities for developing greater use of his products as the basis for his calculations. He will come to regard production almost wholly as a means of supplying a demand, existing or stimulated. His will be the objective attitude in management.

"In the application of that attitude to the practical problems of our business, scores of readjustments will have to be made, first in mental viewpoint of hundreds of men up and down the executive lines, then in the handling of a multitude of small daily situations as well as in decisions in regard to major operating and organization questions.

"It is in regard to merchandising theory and practice that we in the automotive business have a great deal to learn from the older industries. The drygoods business, the typewriter business, the cash register business and scores of other of the older industries have, through experience, evolved merchandising methods and principles which are fundamental in character. We are wasting time and money when we don't study those principles in a fundamental way and analyze their possible application to our specific automotive problems.

"The obvious objection that 'our business is different' seems to me to be a reflection of mental laziness in far more cases than it is a studied conclusion developed from hard study.

"In personnel as well as in merchandising matters, the objective approach in management seems destined to replace the subjective. Serious effort on the part of management to understand the motives, desires and potentialities of employees will be used as the basis

for handling men far more in the future than in the past. More and more it will be realized that the urge to create is fundamental in most men who achieve permanent business success under present conditions. In so far as the executive maintains an objective point of view, in so far as he does achieve and is dominated and actuated by his creative instincts, he will find it possible to have his desires satisfied and to go forward successfully in the economic future which lies ahead. He can no longer afford the subjective view of his relations to his industry and his employees; he cannot properly visualize his company, his industry as merely an environment to be molded to gratification of his own personal pleasures, the fulfillment of his personal whims or the inflation of his own ego.

"It seems to me worth emphasizing, moreover, that it is no mere coincidence that commerce has reached its peak of achievement in the United States just at a time when the average American finds himself blessed with unparalleled opportunities and means of mental and spiritual stimulation. The one has made the other possible—of that there is not the faintest shadow of a doubt. No less can there be any doubt that the gradual change from the subjective to the objective in management will be among the most important factors in amplifying those blessings in the future."

At 44 the president of a corporation which this year will do a \$250,000,000 business, the third largest unit in the powerful General Motors Corp., Mr. Mooney still claims to be "wondering what it's all about." Beginning with a technical training at Case School of Applied Science and finishing up at New York University, his operations indicate a profound knowledge of the psychological intangibles of business along with a practical understanding of engineering details.

Then came a period as associate editor of *American Machinist* when that publication was a part of the old Hill Publishing Co. and later, years of industrial experience with Westinghouse Electric & Manufacturing Co., B. F. Goodrich and Hyatt Roller Bearing Co. before the latter organization became a General Motors subsidiary. Next his part in the world war—overseas with the 84th Division as a captain in the 309th Ammunition Train, 159th Field Artillery Brigade.

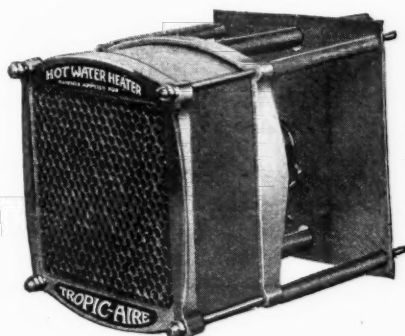
Finally, there is the General Motors period of his work, starting when he became president and general manager of the then sick Remy Electric Co. in 1920. His former associates tell thrilling stories of the business drama which was acted out during those two years with J. D. Mooney as the star and a number of General Motors executives in the role of dramatic critics. The show turned out to be a hit. Then the next engagement as general manager of General Motors Export Co., starting in 1921, and afterward his accession to his present position in 1923.

Now he is an active business executive, but still maintains broad interests; in *Century Magazine* for August he contributes an article, "Atlas Wakes Up." He continues to manifest the many-sided personality which has brought him to the present stage in his business career. But around all of these many sides, one is constrained to speculate, perhaps there runs a single thread of inspiration, expressed, possibly, in the opening sentence of that *Century* article—"The urge to create, to perpetuate himself in his works, is the trait above all others which distinguishes man from the lower animals."

The Latest in Accessories

Car Heater

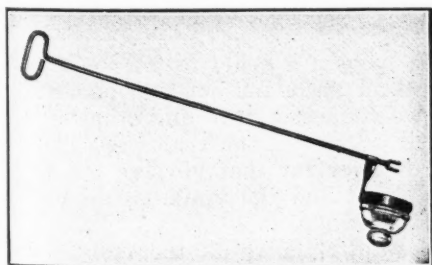
TROPIC-AIRE heats automobiles with hot water from the engine cooling system. The heating unit mounts on the rear of the dash and is directly connected to the water system of the car. By taking the water directly from the engine, this heater gets into action very quickly after the car is started. An electric fan mounted on the back of the heater forces the air to circulate and results in an even distribution of heat throughout the car.



It is said that this fan draws no more current than a tail light. A unique use of this heater in the summer time when the water connection is removed, is to use the fan only for the purpose of supplying a cooling breeze. The fan switch is located on the instrument board and provides for either low or high speed fan operation. This heater is made by Tropic-Aire, Inc., Minneapolis, Minn. Prices and further details may be had by addressing the company directly.

Oil Tester

AN unusual type of oil tester is made for the Model T Ford by the Coil Mfg. Co. of Evansville, Ind. In addition to the familiar long handle with the fork end for turning the pet-cock

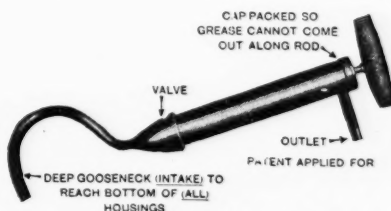


there is a glass bowl attached to this handle, which picks up a sample of the oil which has been drained off. By us-

ing this the oil attendant is enabled to show his prospect the condition of his oil, with the result that complete oil changes are frequently ordered.

Grease Extractor

A DIFFERENTIAL cleaner which removes all of the dirty, wornout grease in the rear end of any car, is produced by the Coil Mfg. Co. of Evansville, Ind. This extractor has a goose-neck which readily reaches the lowest point of the differential. It is also pos-



sible to use this tool for flushing the differential with kerosene. The barrel of the pump is made of 20 gage steel and is 1½ in. in diameter, 15 in. long and is finished in baked black enamel. The piston rod is 18 in. long, and ¾ in. in diameter. The cap is of pressed steel and the handle is of hard wood. This pump is so constructed that grease will not work out along the handle, as the cap is packed. Not only is this item useful in differential service, but it is also valuable for cleaning out transmissions. This unit may be had with a flexible steel tubing in place of the stationary gooseneck.

Tire Chain Repair Plier

SEVERAL unique features are claimed for the Dreadnaught Chain Plier No. 44, not the least of which is that cross chains may be



taken off and replaced without removing tire chains from wheel. These are made by Columbus McKinnon Chain Co., Tonawanda, N. Y. This plier is drop forged from high grade steel hardened and tempered in oil. The hardened jaws with which it is equipped permit the plier to be used in cutting rim chain which obviously is an advantage to the user.

Packed in individual cartons attractively labeled for shelf display, it is 10½ in. long and weighs 1¼ lb. Price \$1.25.

Autolog

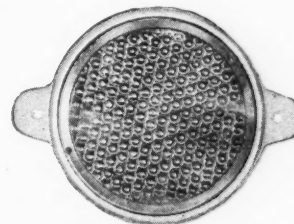
THE Cooper Autolog is a nickel-plated instrument two and one-half inches in diameter, that may be clamped tightly to the spider of any steering wheel by tightening two small nuts. The bottom or body of the Autolog revolves carrying with it the card on which the entries of gas and oil purchased are made under the proper dates. The illustration below shows the Autolog in position with the



card turned to record purchases made on the 5th day of the month. Writing surfaces are provided on the top plate for recording the date of car lubrication, battery testing and oil changes. These records will be erased and changed frequently but the purchase records on the card are protected and kept for tabulation with the mileage at the end of the month. This device is made by the Cooper Manufacturing Co. of Marshalltown, Ia., and sells for \$1.

Reflecting Signals

REFLECTING signals by means of which the width of a vehicle or merely its rear end, is indicated, are made by the Reflex Sign and Signal Co., of Hamburg, N. Y. Originally made as highway warning signals, the practicability of this construction in



vehicle protection was recognized and vehicle style "Circle-Fleks" warning reflectors developed. These signals go under the name of Tiger Eye and range in price according to size, shape and mounting, from \$1.50 to \$3.85.

SPEEDING UP SERVICE WITH SPEED

(Continued from page 25)

sufficient to fully inflate five passenger-car tires.

Appearance of service equipment is an item that Mr. Stephens places next to speed. And he insists that he has the very best men in his employ riding his present motorcycles, giving fast, competent battery and tire service.

"It would be a joke," he says, "to have a fast, attractive looking motorcycle rush up to a customer on the street, almost before he gets through calling, and then have a slow, clumsy mechanic do the work.

"The type of man must fit the equipment," Mr. Stephens repeats. "But they aren't hard to get, for there is a big attraction to the opportunity of riding a motorcycle. It has an appeal to young men similar to aviation. It is about the fastest way they can travel outside of airplanes.

"With trucks, our service men used frequently to get a ticket for driving no more than 35 miles an hour on the streets, because of the danger to other traffic. With motorcycles, it is different. There is a sort of fraternity among all motorcycle riders, including the motorcycle police.

"Not long ago one of our service men was followed all the way into our main station, in the center of town,

from near the corporation line, by a motorcycle officer. He didn't catch our man until he stopped at the station. Then he jumped on him. 'Hey—you! Don't you know you was doin' 65 all the way down Euclid Avenue? Well, do you want to take a spill? I've rode these things long enough to know that's too fast here in town to keep from winnin' the lilies.'

"The officer didn't say a word about danger to other traffic or pedestrians, nor did he give our man a ticket. It was just a bit of brotherly advice, it seemed.

"That condition has a lot to do with the speed with which it is possible to make deliveries entirely from the main station over a 20-mile radius twice as fast as was possible with trucks. Why, the other morning our driver started out at 9 o'clock to deliver a 40 x 8 tire to Painesville, 30 miles away. He rode back into the station at 11, two hours later."

Over the eight months' period that Mr. Stephens carefully kept operation cost figures, in cooperation with the local motorcycle dealer, the average number of miles obtained to the gallon of gasoline was 36. The dates run from July 3, 1927, to the end of February, 1928. The cost of repairs during that time was \$16 and included one new tire.

The Tactless Retailer Turneth Away Jack

(Continued from page 27)

She went to the front of the building, asked the proprietor where her car was and related the occurrence. He didn't even offer an excuse. Worse, from the woman's viewpoint, he said not one word of any kind. Merely went and got her car, took her money and allowed her to drive off, without even a word of thanks. If you think for a moment that the women of the Tuesday Ladies' Bridge Club didn't hear about that shop owner, then you don't know women.

Early association with retailing is not entirely essential to success as a retailer. It is desirable, but even more desirable is a sense of humor and a knowledge of human nature. The reader, if he will think, will recall more instances where retail businesses have failed from lack of plain, ordinary courtesy than from lack of capital, experience or accounting knowledge. This applies equally to selling automobiles or general automotive retailing, although we are thinking specifically of the general garage business, selling gas and oil, accessories, repair jobs and things of that kind.

The trouble seems to be that many owners of busi-

nesses fail to bring to their jobs an impersonal quality; they think that the customer who complains is specifically complaining of them. They are always on guard to defend their honor and seem never to realize that the job should be entirely impersonal; the one endeavor to make customers so satisfied that they will continue to trade with them and bring others, thus increasing the clientele. They should realize that *while a business may—under certain circumstances—exist without keeping old customers and adding new ones, it cannot prosper*. Instead their attitude too often is, "Well, what about it?" They are always looking for insults, whereas they should think, "This man has got certain needs that he will pay me to fill. I must get the job of filling those needs, regardless of whether he is pleasant or unpleasant."

As one of the writer's first employers used to say, "Let 'em kick and make 'em pay for it. What we want is the money in the cash drawer."

The advice is a bit mercenary for this day and age, but the idea is good.

A Good Standard Dealer Layout

(Continued from page 33)

using the alley, for while it would give a drive-through, it would sacrifice one of the service spaces. With one of the storage spaces vacant there should be no trouble in turning and as most cars come in for storage or service, they are half way around when in position.

Any suitable material may be used for a building of this sort but if hollow tile is used, reinforced concrete piers for the support of the trusses are advisable. The piers may be constructed by turning the hollow tile on end and filling them with soft concrete as the work proceeds, using steel rods for reinforcing. Trusses may be wood or steel, but wooden ones are more fire

resisting than steel in spite of a belief to the contrary.

Instead of an overhead track for hoisting and conveying in the shop, we suggest a traveling crane running between the rear truss and the rear wall. This truss must be made heavier for that purpose but the extra cost would be slight and the crane would have application over the whole shop.

You will probably want to finish off the front side of the building in more style than the tile would give. Cement stucco on tile gives a good, desirable finish and can be made very attractive at low cost. Brick veneer would cost much more.

READERS' CLEARING HOUSE

Questions Answered By C. Edward Packer

Wills Valve and Ignition Setting

Please publish instructions on setting the valves and timing of the Wills Ste. Claire V type engine. We are installing all new gears in the front end.—Taylor Motor Co., Danville, Ill.

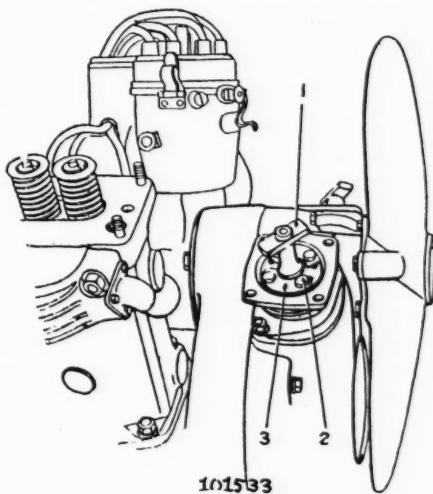
THE following instructions were originally written to cover the work of grinding valves and cleaning carbon. These instructions, however, will cover the work that you are going to do. The order in which the work is done is as follows: Use protecting covers over fender and other parts of car. Disconnect one battery terminal. Remove hood and replace the hinge screw in the radiator. Drain radiator saving anti-freeze solution. Disconnect upper hose connections and push same back on intake manifold pipe. Note condition of hose. Turn off gasoline and vacuum tank and disconnect gas line. Remove bolts joining radiator tie rods to radiator tie rod eyes. Remove four acorn nuts holding intake manifold to cylinder. Remove bolts holding hot spot tube to manifold. Disconnect gas line at carburetor and remove intake manifold and carburetor as a unit.

Turn engine by hand until No. 1 cylinder which is the front one on the right side has its piston coming up on compression. Then crank engine slowly until the marked IO1 (intake opening No. 1) appears in exact center of flywheel inspection opening. This inspection opening is at the top of the flywheel housing just at the right of the motor generator. Remove camshaft inspection covers and valve follower covers. Remove nut connecting camshaft adjustment sleeve to camshaft housing. Remove both camshaft housings. Disconnect heater clamp from the exhaust pipe, both sides and remove the heater tube assemblies. (On some cylinders the heater tubes are removed intact with the cylinder block.) Disconnect exhaust pipe from manifold. Disconnect water inlet manifold from cylinder. Disconnect the long distributor control rod at the front bracket. Remove nut and lock washer holding ignition assembly to generator and free the rear end of the assembly slightly. Open release cock in cylinders and remove cylinder.

To remove the valve secure four blocks 8 3/4 in. by 2 1/2 in. by 1 in. and

place a block in each cylinder. When the cylinder is turned upright on the bench the blocks serve to hold the valves while the springs and locks are being removed. With a suitable fixture press down on the valve spring seat and release the pressure and remove the lock collars. Reface valves or use new ones if old valves show warpage, pits or cracks. Remove carbon from combustion chamber and tops of cylinders. Blow loose carbon from cylinders using air pressure. Wash cylinder and note condition of valve seats. If burned or pitted they should be resealed. Grind valves and obtain a seat 1/16 in. wide in center of valve face. Wash off all traces of grinding compound.

While cylinders are off the engine loosen dust cover on front end of generator and slide it forward. Remove



Wills Sainte Claire camshaft drive

one of the cap screws holding the generator drive shaft to the generator clutch and inject type "D" lubricant in the clutch through the opening. Clean pistons, noting conditions of piston walls and rings and fit of connecting rod bearings. Drain engine oil sump, removing oil sump and screen. In replacing cylinder blocks, clamps are used on the lower piston rings and these must be removed from below after cylinder is in place.

Replace the cylinders. Install new cylinder to crankcase gaskets and note that front and rear crankcase dowels are in place. Crank engine until top of end pistons are just even with wrist pin holes of center pistons. Block wheels and put car in gear and set emergency brake. Replace cylinders.

Replace lock washers and nuts holding cylinders in place. If engine position has been disturbed it should again be set with No. 1 piston coming up on compression and the mark IO1 in line with inspection opening. The right camshaft is set so that the point of No. 1 intake cam which is second from the front points toward the upper end of the opening on the left side.

The slot in the upper camshaft drive shaft should then point toward the fan as the housing is placed in position. The left camshaft is set in similar fashion so that No. 5 intake cam which is second from the front points toward the upper edge of the inspection opening (to the left). The slot in the camshaft drive shaft should then be almost in line with the camshaft itself, to correspond with the position of the coupling upper cross arm on the left side when the IO5 (intake opening No. 5) timing mark is at the center of the flywheel inspection hole. The tappets are set at .012 in. clearance at the heel of the cam and the timing is considered correct when there is a clearance of .006 in. when the mark IO1 appears at the inspection hole while cranking engine in the normal direction.

The relation of the camshaft to the engine may be changed by loosening cap screws (2) shown in the illustrations. When the engine has been cranked in the normal running direction until there is a clearance of just .006 in. at the No. 1 intake valve the position of the IO1 flywheel mark should be just at the center line of the inspection hole. If it is above center the timing is late and if it is below center the valve timing is early. With correct timing the cap screws marked (2) should be tightened. The ends of the locking plate (3) should then be turned up.

After replacing camshaft housing connect water inlet manifold to cylinder. Install heater tubes, hook up exhaust pipes and heater tube clamp. Clean and install carburetor and intake manifold assembly. Connect gas line and carburetor and vacuum tank. Connect radiator tie rods and replace hose connection. Replace washer and nut holding ignition assembly to generator. Connect long distributor control rod. Connect battery and clean and adjust distributor points. If work is done on distributor points they should be syn-

[READERS' CLEARING HOUSE]

chronized. Clean spark plugs and adjust gap. Replace oil sump and screen and put in 7 qts. of oil. Fill radiator and condenser tank.

Burns Valves

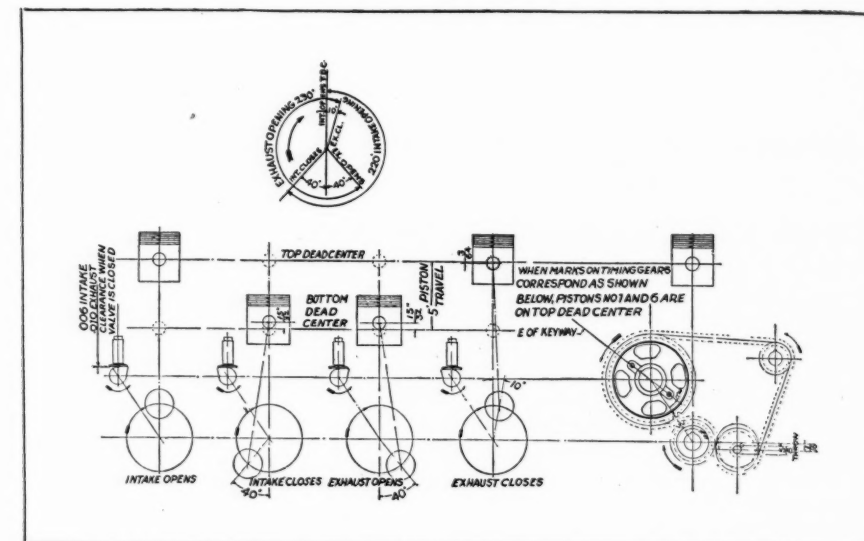
I have a Graham Bros. truck which is giving me considerable trouble. I had the truck overhauled having the carbon cleaned, the valves ground and special expansion type rings installed, the bearing and starter chain tightened and adjusted. Since this work was done this truck keeps burning the valves, after running about 2000 miles. The valve timing and ignition timing has been checked three different times. The valves were given a clearance of .010. Hollow valve lifters were installed to give the valve stems all the oil possible. I used Ethyl gas and have used it for a long time and did not have any trouble before. I used about one quart of oil in 50 miles before the truck was overhauled and since then use very little oil, due perhaps to the special rings I put in. I would appreciate any information you could give me regarding this trouble.—Walter Daniels, 1327 N. 3rd St., West, Cedar Rapids, Iowa.

OFF-HAND, it sounds as though one or two things have been done that have not been mentioned. These include a slight retarding of your spark and a readjusting of the carburetor so that the mixture is a little too lean. You appreciate that either of these would burn valves very quickly. Another possibility is that in refacing your valves, they were refaced to the extent that the upper edge is very thin. This will cause this edge to burn and the burning may extend down across the face, thus quickly destroying the valve. Any misalignment of the reamer also would cause faulty valve action, which would probably develop into burned valves. We believe, however, that the most likely causes are the lean mixture or the retarded spark, possibly both.

Protecting Generator With Short Circuiting Wire

In the event of removing a battery from a car and operating the car while the battery is out, how is the generator prevented from burning out by grounding same?—Louis Sleeman, c/o McDonald Garage, Warracknabeal, Victoria, Australia.

THE ordinary automobile type generator already has one brush grounded. When you ground the insulated terminal which is connected to the insulated brush you have both sides of the armature grounded. When the machine starts up it will generate a slight voltage, which will send a small current through the wire you are using for the ground connection. Except for the slight voltage needed to send the current through this wire, the two brushes are at the same potential or voltage. This means there is hardly any voltage difference developed in the



machine and accordingly there is practically no voltage available to send current through the shunt winding.

Accordingly the machine continues to send a very small current through the short circuit connection and never builds up any appreciable voltage and never has enough current in the shunt winding to amount to anything. On the other hand, if operated without any connection it builds up an abnormal voltage and sends all of its current through the shunt winding causing it to overheat in a very short time.

If operated very long this way the short circuit current usually demagnetizes the machine. After the battery is put back in the car the generator can be remagnetized by shorting the two cutout terminals together with pliers or screw driver. This energizes the generator fields with battery current.

Reducing the Charge

I am servicing a 1920 Buick, Model K-47. I can't cut down the charging rate below 8 amp. The generator has new brushes and the armature was turned down. What can I do about it?—Alfred R. Noack, 120 Orchard St., Brockville, Conn.

THE normal output of this generator is 7-9 amp. at 825 r.p.m., increasing to 12-15 amp. at 1500 r.p.m., or 20 miles an hour. In other words, at about 10 miles an hour it is perfectly normal for your generator to produce about 8 amp. It is possible, however, that this is somewhat in excess of what you had before putting in the new brushes. In turning down the commutator, the diameter is reduced, of course. This has evidently thrown your third brush slightly in advance of where it formerly rested. It may be necessary to slot your brush holder a little to let the third brush come back against the direction of rotation. Doing this will

probably reduce your output to 6 or 7 amp. which is about as low as you can expect after the machine has cut in.

Jewett Timing

Please show diagram of Jewett 1926 timing.—A. G. Attenburg, Clemann Motor Co., Gladbrook, Iowa.

In line with your request we are showing the desired diagram.

It's Not Indifferent

Will you please give the correct tappet clearance for a 1928 Oldsmobile. Is it a fact that it is advisable to grind valves on a new car as I had a talk with a party who says they are indifferently ground and starting? This car starts hard with high fitted at the factory. What makes for hard test gas. I never crowd a car until the engine is up to 120 degrees as shown on the heat indicator.—J. B. Ide, Orchard Lake, Mich.

THE correct tappet clearance for your car is .008 in. on all valves except when the engine is cold. It is good practice as a rule to grind valves on a new car after the engine has become thoroughly worked in. This is not necessary, however, because of any indifference on the part of the manufacturers. It is true that all metal ages or seasons in use. The valves are no exception. Their rising and falling from the seats and their heating and cooling does much to season them. Many years ago when automobile production was very small it was possible to age the different castings before machining. That is not possible today with the present high rate of production. As a consequence it is not unusual for parts to change their shape slightly in service. The result is that the valve seat or head may distort slightly after the car has been put into use. Consequently, it is very good practice indeed to grind in the valves after the engine

[READERS' CLEARING HOUSE]

has become thoroughly limbered up. It may be that bad valve seating is the cause of your hard starting. It is more likely, however, that a good tuning up, including cleaning and setting of the breaker points and spark plugs and a cleaning out of your gasoline filter, will do much to make your car easier to start.

Heat Indicator and Axle Questions

Can you tell me how the heat indicator works, or operates, on a standard model custom Studebaker built in 1927? Also, in the rear axle of this model there are two slotted rings to adjust the pinion, one is larger than the other. How is this part adjusted?—James Grayhek, 1399 W. San Carlos, San Jose, Calif.

THE heat indicator on the car referred to is merely a distant type thermometer. The expansion medium is located in a chamber which is inserted in the water jacket of the engine. As this expands it acts through the flexible connection and raises the fluid in the instrument on the dash, as it contracts it lowers the fluid in the instrument on the dash.

The car that you refer to has the pinion adjustment made by adding or removing shims. To do this, pull out both axle shafts, drop the drive shaft and then remove the complete pinion and ring gear assembly taking it out from the front of the rear axle housing. Place the complete assembly on the bench. To get at the pinion adjustment, remove the ring gear and differential assembly. One of the slotted rings that you refer to controls end-play in the pinion shaft bearings. The other one holds the pinion and bearing assembly in the housing. However, it is the shims that determine just how far this goes into the housing and it may be necessary to experiment a little with this setting in order to get it just right.

New Radiator Needed

One of our good customers has a Pierce-Arrow Six model 1920 that has been run 36,000 miles and still is in fine shape except that when driven faster than 40 miles an hour it overheats badly and is useless on the road. The best mechanics in Jacksonville have worked on the car and have given it up. The motor ran hot when they started and is still running hot after the following adjustments and repairs have been made; probably it heats worse now. The engine number is 321,005. We had the carbon cleaned, valves ground, new rings installed, the ignition and valve timing has been checked and rechecked. The pump has been removed and repacked and the water circulation is apparently O. K. The car

averages 12 miles per gallon of gas. We have tried various adjustments on the carburetor without correcting this trouble. The thermostat has been removed entirely. Radiator man now suggests installing a 4 in. coil cartridge type radiator to replace the 3 in. coil now on the car. Is this advisable? Dr. L. E. Bransford owns the car and is trying hard to get it back in shape, as it is in fine condition other than this trouble and should be good for many more miles. We will appreciate anything you can tell us.—Curty & Oak, 337 Riverside Ave., Jacksonville, Fla.

FROM our experience with these cars we feel sure that your entire trouble is within the radiator core. We do not believe there is any need of going to a larger core, but feel certain that renewing the present core with a new type Harrison core will overcome your trouble completely. The passages in this old radiator are very small and clog readily. The water may appear to circulate freely but at high speed you will probably find that it is merely piling up in the filler neck and going out the overflow instead of circulating and cooling the engine as it should. Due

to the construction of this radiator, we do not believe you will have any success in even the most thorough type of removal and cleaning, but as we said before we feel certain that the only thing for you to do is to renew this core.

The Ammeter Shorts the Generator

Why will a Dodge Bros. generator show no charge when an ammeter is connected between the positive generator terminal and the frame of the car with the cable removed from the generator. I know the generator is charging O. K. when normally connected—Bert M. Hennis, Buckeye Garage, Strasburg, Ohio.

AN ammeter has a very low resistance and acts as a short circuit. This means that it acts as a ground connection on the live generator terminal. Accordingly when the machine starts up it will generate a slight amount of current due to the residual magnetism and if the machine is O. K. there must be some current going through the ammeter. This connection however, holds down the voltage of the machine to such an extent that the field winding does not get any appreciable current.

We would anticipate, however, that you would get enough short circuit current to show on the ammeter. We have known of tests of this kind showing anywhere from five to ten amperes short circuit current. If the machine really is O. K. you might make the test in a little different manner. Run it with the wire off at fairly low engine speed and while running in this fashion connect the ammeter. The needle should suddenly jump up and show a reading and then if a short circuit connection really does kill the machine, the ammeter needle should then drop back to zero or nearly to zero.

Buick Numbers

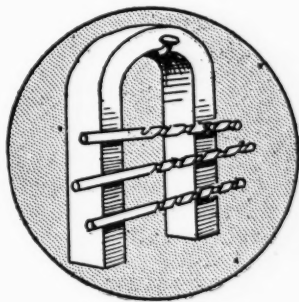
Will you please tell me where I can find the serial number of the 1926 and 27 Buicks and where are these numbers located?—D. I. DeVault, 1510 Rosemont Ave., Chicago, Ill.

THE numbers of the 1926 Buick are located on the left frame member at the rear. The Standard models range from 1,398,244 up, for 1926, while the Master models range from 1,412,093 up, for the same year. In 1927 the numbers are located on the right frame at the front. In the model 114½ the numbers started from 1,638,800. Model 120 started at 1,661,435. Model 128 started at 1,677,210.

SHOP KINKS

Ideas that have proved useful

A HANDY way to keep a small twist drills from getting lost or broken is to place an old magnet from a magneto on the bench. This can be hung over a pipe, or it can be clamped down at the back of the bench by bending a couple of nails over it. The twist drills can be laid in place and will always stay there until wanted.—Otto Kiel, Monroe Auto Co., Monroe, Wis.



Readers of MOTOR AGE are invited to submit ideas that they have found useful in doing some particular service job in the shop in a better or quicker way. For each one published \$2.00 will be paid. Whenever possible the idea should be accompanied by a sketch or diagram from which a drawing can be made.



We Are Doing Fine, Thank You

DETROIT, MICH.—Yes, I want to renew my subscription to M. A. Would have done so before now but have been on my vacation and just returned this morning. Keep up the good work, you are doing fine. I have missed M. A. while on my vacation. More power to the editor.—*W. T. Reed.*

He Worships at the Altar of Service

YAKIMA, WASH.—Electrical departments and general service articles are most interesting to me.—*H. L. Thomas.*

Pack's Stuff Packs a Wallop

JERSEY CITY, N. J.—Many thanks to C. Edward Packer for his interest and assistance in sending me instructions on the Mercer car. The diagram of the cross-shaft was most helpful, as were also the cross-sectional views of the motor.—*Charles Grieb.*

An Ounce of Prevention

HERINGTON, KAN.—I am selling out and leaving this part of the country. As soon as I get located I will have you send MOTOR AGE to me as I don't think I can get along without it.—*J. F. Swanson.*

Then We Are Pleased

WINFIELD, KAN.—I am pleased and find M. A. very helpful.—*T. D. Anderson.*

One For Architectural

SAINTE JOHN, N. B., CANADA—We are interested in your garage plans.—*J. Clark & Son, Ltd.*

Terrible, Terrible

WILLAMINA, ORE.—I have missed a copy of M. A. and that's terrible.—*S. E. Bryant.*

LETTERS to the editor from those whose "attention has been called"; from those who point with pride and those who view with alarm, from those who are easy to please and those who are hard to please; from those who are happy when they find a good thing and those who are happier when they find something they consider not so good; from those who boost and those who knock; from those who see the doughnut and those who see the hole; in other words, Dear Subscriber, from you and you and you—as well as from the man who borrows your copy of MOTOR AGE or reads it over your shoulder.

The Renewing is the Best

SANTA MONICA, CAL.—The best thing about MOTOR AGE, according to my opinion, is the subscription renewal department. About the time my



subscription expires, and I have just about decided that I can get along without the magazine, here comes a flock of "appeals" which give me the impression that the little old magazine will be unable to continue in existence without my particular subscription, and everyone will lose their jobs, so, rather than be the cause of all this trouble, I scrape together the three bucks and send it in.

I'm sorry I can't say as much for



some of your other departments. For instance, my copy of issue dated Aug. 2 comes along with about half of the pages left out, pages 17 to 32 to be exact, and I understand that this missing section contains something I have been anxious to see, a description of the new De Soto.

So just tell your renewal department that they can count me out if I don't get a complete copy of the offending issue. I'll bet they will get it to me right now.—*Herbert Royston.*

Thanks! May You Enjoy Some of the Same

OAK HILL, W. VA.—Success to MOTOR AGE!—*Virgil Tuggle.*

A Silent Reader Speaks

GAINESVILLE, FLA.—I have been a silent reader of MOTOR AGE for several years and it is with much pleasure that I read the Readers' Clearing House. I get lots of good information reading the questions and answers.—*J. F. Wyche.*

Wonderful M. A.

VENTURA, CAL.—Please give my renewal your prompt attention for I don't want to lose any copy of your wonderful MOTOR AGE.—*Joe S. Andrade.*

As He Likes It

WORCESTER, MASS.—We are still receiving MOTOR AGE and like it.—*Richard E. Saunders.*

And So Do We

PITTSBURGH, PA.—We regret that it will be impossible to continue with your splendid paper.—*J. D.*

Don't Wanta Miss

NATCHITOCHER, LA.—Please forward my MOTOR AGE to De Quincy as I don't want to miss a one.—*O. B. Stayes.*

Prices, Weights and Equipment of Current Passenger Car Models

Important changes in Specifications and Price Tables since last issue:

CADILLAC
Price Changes
GRAHAM-PAIGE
New Models Added
LA SALLE
Price Changes, New Models and Specifications

Passengers and Model					F.O.B. Price	Doors	Net Weight*	Standard Equipment
CADILLAC "341" "Fisher"								
2p. Roadster....		\$3350	2	4590	aeghlmnprr			
4p. Phaeton....		3450	4	4640	aeghlmnprr			
4p. Sp. Phaeton....		3950	4	5125	Beghiklmnprr			
7p. Touring....		3450	4	4630	aeghlmnprr			
2-4p. Coupe....		3295	2	4820	aeghlmnprr			
2-4p. Conv. Coup.		3505	2	4665	aeghlmnprr			
5p. Coupe....		3595	2	4760	aeghlmnprr			
5p. Sedan....		3695	4	4880	aeghlmnprr			
5p. Town Sedan....		3495	4	4875	aeghlmnprr			
7p. Sedan....		3795	4	4965	aeghlmnprr			
5p. Imp. Sedan....		3745	4	4925	aeghlmnprr			
7p. Imp. Sedan....		3995	4	5025	aeghlmnprr			
5p. Imperial Cab		3745	4	4925	aeghlmnprr			
7p. Imperial Cab		3895	4	5025	aeghlmnprr			
"Fleetwood"								
5p. Sedan....		\$4195	4	4995	aeghlmnprr			
5p. Sedan Cab....		4195	4	4995	aeghlmnprr			
7p. Sedan....		4295	4	5080	aeghlmnprr			
7p. Sedan Cab....		4195	4	5080	aeghlmnprr			
5p. Imperial....		4345	4	5035	aeghlmnprr			
5p. Imperial Cab		4345	4	5035	aeghlmnprr			
7p. Imperial....		4345	4	5135	aeghlmnprr			
7p. Imperial Cab		4445	4	5135	aeghlmnprr			
5p. Club Cab't....		4395	2					
5p. Phaeton Sed.		5750	2					
5p. Im. Pha. Sed.		5995	2					
5p. Town Cab Con.		5250	4		aeghlmnprr			
5p. Town Cab Con.		5500	4		aeghlmnprr			
5p. Lim Bro'm Con.		5500	4		aeghlmnprr			
CHANDLER "65"								
5p. Touring....		\$ 895	4		ahmn			
5p. Sportster....		995	2		ahmn			
3p. Coupe....		875	2		ahmn			
5p. Sedan....		895	4		ahmn			
2-4p. Coupe....		955	2		ahmn			
5p. Del. Sedan....		995	4		ahmn			
2-4p. Cabriolet....		1075	2		ahmn			
"Royal 75"								
5p. Sedan, 2d....		1295	2					
4p. Coupe....		1295	2					
5p. Sedan, 4d....		1395	4					
5p. Del. Sedan....		1495	4					
"Big Six"								
7p. Touring....		1725	4	3360	ahlmnpw			
5p. Met. Sedan....		1525	4	3800	ahmnt			
4p. Coupe....		1725	2	3535	ahmnt			
3p. Ctry. Club....		1725	2	3535	ahmnt			
5p. Royal Sedan....		1725	4	3800	ahmnt			
3-5p. Cabriolet....		1825	2	3450	ahmp			
7p. Sedan....		1925	4	3895	ahmnt			
"Berline Sed."								
7p. Touring....		1995	4	3655	ahlmnpw			
4p. Coupe....		1925	2	3640	ahmnt			
4p. Ctry. Club....		1925	2	3640	ahmnt			
5p. Sedan....		1795	4	3900	ahmnt			
7p. Sedan....		2195	4	3950	ahmnt			
3-5p. Cabriolet....		2095	2	3600	ahmp			
5p. Del. Sedan....		1995	4	4005	Bhilmnpw			
"Berline Sed."								
2p. Roadster....		\$495	2	2030	dr			
5p. Touring....		495	4	2090	dr			
5p. Coach....		585	2	2360	thr			
2p. Coupe....		595	2	2235	thr			
5p. Sedan....		675	4	2435	thr			
2-4p. Con. Sp. Cab		695	2	2265	thr			
5p. Imperial....		715	4	2405	thr			
CHRYSLER "65"								
2-4p. Roadster....		\$1065	2	2730	aghrmn			
5p. Touring....		1075	4	2770	aghrmn			
2p. Bus. Coupe....		1040	2	2780	aghrmn			
5p. Sedan, 2d....		1065	2	2905	aghrmn			
5p. Sedan, 4d....		1145	4	2960	aghrmn			
2-4p. Coupe....		1145	2	2875	aghrmn			
"75"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"Imp. '80"								
2-4p. Roadster....		\$2795	3	3870	aeghlmnpw			
5p. Sedan....		2945	4	4125	aeghlmnpw			
7p. Sedan....		3075	4	4250	aeghlmnpw			
5p. Town Sedan....		2995	4	4140	aeghlmnpw			
7p. Sedan Lim....		3495	4	4285	aeghlmnpw			
"85"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"90"								
2-4p. Roadster....		\$2795	3	3870	aeghlmnpw			
5p. Sedan....		2945	4	4125	aeghlmnpw			
7p. Sedan....		3075	4	4250	aeghlmnpw			
5p. Town Sedan....		2995	4	4140	aeghlmnpw			
7p. Sedan Lim....		3495	4	4285	aeghlmnpw			
"100"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"105"								
2-4p. Roadster....		\$2795	3	3870	aeghlmnpw			
5p. Sedan....		2945	4	4125	aeghlmnpw			
7p. Sedan....		3075	4	4250	aeghlmnpw			
5p. Town Sedan....		2995	4	4140	aeghlmnpw			
7p. Sedan Lim....		3495	4	4285	aeghlmnpw			
"110"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"115"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"120"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"125"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"130"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"135"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"140"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"145"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"150"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"155"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"160"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"165"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"170"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"175"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"180"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"185"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"190"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"195"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"200"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		1535	4	3340	aeghrmn			
4-5p. Town Sedan		1855	4	3360	aeghrmn			
"205"								
2-4p. Roadster....		1555	2	3190	aeghrmn			
2-4p. Coupe....		1535	2	3235	aeghrmn			
5p. Royal Sedan....		153						

Prices, Weights and Equipment of Current Passenger Car Models

Passengers and Model	F.O.B. Price	Doors	Net Weight*	Standard Equipment	Passengers and Model	F.O.B. Price	Doors	Net Weight*	Standard Equipment	Passengers and Model	F.O.B. Price	Doors	Net Weight*	Standard Equipment	Passengers and Model	F.O.B. Price	Doors	Net Weight*	Standard Equipment
4-5p. Vic. Bro'm.	\$2760	3550	aeghiknprx		5p. Sedan.....	\$1395	4	3040	aghnr	134" W.B.					"TV6"				
5p. Sedan.....	2790	3590	aeghiknprx		2p. Cabriolet....	1435	2	2820		5p. Family Sed....	\$2450	4	4345	aeghlmprtx	2p. Roadster....	\$5800	2	4300	afghlmprx
5p. Ox. Sedan....	2790	3590	aeghiknprx		2-4p. Cabriolet..	1475	2	2965	aghnr	2-3p. Coupe.....	2495	2			5p. Spt. Tour....	5600	4	4700	afghlmprx
5p. Spt. Sedan....	2910	3630	aeghiknprx		"Century 125-8"					7p. Family Sed....	2575	4			7p. Touring.....	5700	4	4700	afghlmprx
3-5p. Con'vt Cpe.	2850	3510	aeghiknprx		5p. Touring.....	1795	4	3300	aghnv	2-4p. Conv. Cpe..	2595	2			5p. Sedan.....	6720	4	5200	afghlmprx
128" W.B.					7p. Touring.....	1895	4	3360	aghnv	5p. Sedan.....	2595	4			7p. Sedan.....	6720	4	5200	afghlmprx
2-4p. Sp. Runab't.	2975	3440	aeghiknprx		2-4p. Roadster..	1895	2	3355	aghnv	5p. Coupe.....	2625	2		aeghlmprtx	7p. Sedan.....	6920	4	5200	afghlmprx
5p. Sp. Touring..	2975	3630	aeghiknprx		5p. Brougham....	2095	2	3515	aghnv	5p. Cab. Sed....	2675	2		aeghlmprtx	7p. Town Car....	9000	4	5200	afghlmprx
7p. Touring.....	3060	3630	aeghiknprx		2-4p. Coupe.....	2195	2	3465	aghnv	5p. Con. Lan.Cb.	2725	2							
7p. Sedan.....	2980	3790	aeghiknprx		5p. Sedan.....	2195	4	3545	aghnv	7p. Sedan.....	2775	4	4345	aeghlmprtx					
7p. Ox. Sedan....	2980	3790	aeghiknprx		5p. Victoria.....	2195	2	3525	aghnv	5p. Imp. Sedan....	2775	4	4315	aeghlmprtx					
7p. Limousine....	3080	3870	aeghiknprx		7p. Sedan.....	2345	4	3360	aghnv	7p. Imp. Sedan....	2875	4	4570	aeghlmprtx					
					7p. Sedan Lim.	2520	4	3360	aghnv	...Tra. Town.C.	4900								
GARDNER					"Century 8"										MARMON				
"75 Std."					5p. Phaeton.....	1905	2	3285	aghnv						2-4p. Roadster..	\$1565	2	2700	ahmnrw
4p. Roadster....	\$1195	22995	afhmnr		2-4p. Sportster..	1915	2	3335	aghnv						5p. Sedan.....	1465	4	2897	ahmnr
5p. Sp. Coupe....	1295	23290	afhmnr		7p. Phaeton.....	1935	2	3355	aghnv	LINCOLN					4p. Vic. Coupe....	1520	2	2367	ahmnr
4p. Vic. Coupe....	1295	23290	afhmnr		5p. Sedan, 2d....	1825	2	3385	aghnv	"77"					2-4p. Coupe....	1465	2	2287	ahmnr
5p. Club Sedan..	1390	43265	afhmnr		4p. Coupe.....	1865	2	3375	aghnv	2p. Spt. Rdstr..	\$4600	2	4930	aeghiknprx					
5p. Std. Sedan..	1495	43330	afhmnr		5p. Sedan, 4d....	1875	4	3455	aghnv	2-4p. Club Rdstr.	4600	2	5010	aeghiknprx					
					2-4p. Cabriolet..	1955	2	3345	aghnv	7p. Spt. Touring.	4600	4	4940	aeghiknprx					
4p. Roadster....	1295	22995	aeghmnr							4p. Spt. Phaeton.	4600	4	4910	beghiknprx					
5p. Sp. Coupe....	1395	23290	aeghmnr		JORDAN					4p. Coupe.....	4600	2	4805	aeghiknprx					
4p. Vic. Coupe....	1395	23290	aeghmnr		"Cross City 6"					5p. Sedan.....	4800	4	4930	aeghiknprx					
5p. Club Sedan..	1490	43265	aeghmnr		4p. Blue Boy....	\$1495	4	2800	beghiknprx	5p. Sedan.....	4800	4	5010	aeghiknprx					
5p. Del. Sedan..	1595	43400	aeghmnr		2p. Spt. Salon....	1295	2	2775	aghmnr	2p. Coupe.....	5000	4	4720	aeghiknprx					
					2-4p. Tomboy....	1395	2	2650	aghmnr	7p. Sedan.....	5000	4	5050	aeghiknprx					
4p. Roadster....	1695	23040	aeghmnr		5p. Sedan.....	1395	4	2775	aghmnr	7p. Limousine....	5200	4	5165	aeghiknprx					
5p. Brougham....	1875	43360	aeghmnr		"JE"					4p. Berline.....	5500	2	5115	aeghiknprx					
5p. Sedan.....	1895	43380	aeghmnr		4p. Collap. Coupe	1995	2	3185	aghmnr	7p. Limousine....	6000	4	5380	aeghiknprx					
...Cus. Coupe....	2095	43390	aeghmnr		4p. Perm. Coupe	1995	2	3185	aghmnr	7p. Brougham....	6500	2	5025	aeghiknprx					
					5p. Victoria.....	1995	2	3275	aghmnr	6p. Ber. Landau..	6500	2	5140	aeghiknprx					
2-4p. Roadster..	2095	3440	aeghmnr		5p. Sedan.....	1995	4	3300	aghmnr	7p. Cabriolet....	6600	2	5160	aeghiknprx					
2-4p. Collap. Cpe.	2495	3625	aeghmnr							7p. Le Baron Cab.	7000	2	5200	aeghiknprx					
5p. Brougham....	2275	43750	aeghmnr		KISSEL					7p. Holbrook Cab	7200	2	5280	aeghiknprx					
5p. Sedan.....	2295	43790	aeghmnr		"6-70"					7p. Collap. Cab	7300	2	5140	aeghiknprx					
					4p. Cpe. Roadster	\$1595	2	2920	ahmr										
GRAHAM-PAIGE					5p. Bro'm Sedan.	1495	4	2915	ahmr	LOCOMOBILE									
"610"					5p. Victoria.....	1595	2	2990		"8-70"									
2p. Coupe.....	\$860	22720	aghmnr		"8-80"					5p. Brougham....	\$2100	4	3525	afghlmnr					
5p. Sedan.....	875	42825	aghmnr		125" W.B.					5p. Sedan.....	2100	4	3575	afghlmnr					
"614"					5p. Phaeton.....	1885	4	3240	ahmnr	4p. Vic. Coupe....	2100	2	3600	afghlmnr					
4p. Coupe.....	1275	23334	aeghmnr		4p. Speedster....	2095	2	3155	ahmnr										
4p. Phaeton....	1435	2			4p. Cp. Rdstr....	2095	2	3343	ahmnr	4p. Spt. Touring.	3300	4	3972	beghikmuprx					
5p. Sedan.....	1295	43450	aeghmnr		5p. Spec. Bro'm.	1995	2	3345	ahmnr	4p. Coupe Vic....	2975	2	3820	aeghlmprtx					
"619"					5p. Bro'm Sedan.	2095	4	3400	ahmnr	4p. Collap. Coupe	3000	2	3780	aeghlmprtx					
4p. Coupe.....	1575	23825	aeghmnr		5p. Conv. Bro'm.	2495	2	3518	ahmnr	5p. Sedan.....	2850	4	3950	aeghlmprtx					
4p. Phaeton....	1745	2			132" W.B.					4p. Collap. Coupe	3000	2	3780	aeghlmprtx					
5p. Sedan.....	1995	43950	aeghmnr		7p. Touring.....	1985	4	3360	ahmnr	5p. Sedan.....	2850	4	3950	aeghlmprtx					
7p. Phaeton....	2110	2			4p. Tourster....	2095	4	3155	ahmnr	5p. Brougham....	2900	4	3990	aeghlmprtx					
5p. Sedan.....	1985	44250	beghikmnp		5p. Bro'm Sedan.	2295	4	3455	ahmnr	7p. Sedan.....	3350	4	4140	aeghlmprtx					
					7p. Sedan.....	2495	2	3630	ahmnr	7p. Sub. Sedan..	3500	4	4280	aeghlmprtx					
5p. Town Sedan.	2085	44150	degghlmnp		"8-80S"					6p. Cabriolet....	6950	4	4	degghlmnp					
5p. Coupe.....	2085	2			4p. Coupe Rdstr.	1995	2	3350		4p. Sportif.....	5900	4	4475	aeghikmnp					
7p. Sedan.....	2110	44375	degghlmnp		5p. Brougham....	1895	4	3250		4p. Roadster....	5900	2	4370	aeghikmnp					
					5p. Sedan.....	1995	4	3350		7p. Touring.....	6000	2		aeghikmnp					
2-4p. Cabriolet..	2185	24140	e		4p. Victoria.....	1995	2	3320		5p. Vic. Sedan....	7300	4	4982	afghlmprtx					
2-4p. Coupe....	2185	2	e		"8-90"					7p. Cabriolet....	7500	4	4930	afghlmprtx					
7p. Phaeton....	2410	2			131" W.B.					4p. Vic. Sedan....	7450	2		aeghikmnp					
5p. Sedan.....	2285	44425	degghlmnp		5p. Phaeton.....	2185	4	3220	ahmnr										
					4p. Speedster....	2395	2	3360	ahmnr	7p. Tour Lim....	5540	4	5640	afghikrtx					
5p. Coupe.....	2385	2			4p. Cpe. Rdstr..	2395	2	3578	ahmnr	6p. Brougham....	5464	4	5640	afghikrtx					
op. Town Sedan.	2385	44325	degghlmnp		5p. Spec. Bro'm.	2295	2	3671	ahmnr	5p. Vic. Sedan....	5600	4	5600	afghikrtx					
					5p. Bro'm Sedan.	2395	4	3760	ahmnr	7p. Lim. Enc. Dr.	5588	4	5688	afghikrtx					
7p. Sedan.....	2410	44550	degghlmnp		5p. Conv. Bro'm.	2795	2	3883	ahmnr	7p. Cabriolet....	5624	4	5624	afghikrtx					
2-4p. Cabriolet..	2485	24270	degghlmnp		139" W.B.					4p. Sportif.....	5900	4	4475	aeghikmnp					
2-4p. Coupe....	2485	2			7p. Touring.....	2285	4	3630	ahmnr	4p. Roadster....	5900	2	4370	aeghikmnp					
					5p. Bro'm Sedan.	2595	4	3755	ahmnr	7p. Touring.....	6000	2		aeghikmnp					
HUDSON					7p. Sedan.....	2795	4	3975	ahmnr	5p. Vic. Sedan....	7300	4	4982	afghlmprtx					
118" W.B.					"White Eagle"					7p. Cabriolet....	7500	4	4930	afghlmprtx					
2-4p. Roadster..	\$1295	23355	ahmnr		132" W.B.					4p. Vic. Sedan....	7450	2		aeghikmnp					
2-4p. Coupe....	1295	23525	ahmnr		4p. Coupe Rdstr.	3185	2	4020	beghix										
5p. Coach.....	1250	23575	ahmnr		5p. Del. Victoria.	3185	2	4100	beghix	7p. Town Bro'm.	7500	4	4615	afghlmprtx					
5p. Sedan.....	1325	43645	ahmnr		139" W.B.					7p. Suburban....	7500	4	4615	afghlmprtx					
7p. Phaeton....	1650	43630			4p. Del. Tourster	3275	2	4000	beghix	...Collap. Cab.	7750	2		aeghikmnp					
5p. Landau Sed..	1650	43805	aghmnr		5p. Del. Bro'm.	3275	2	4360	beghix										
5p. Std. Sedan..	1450	43750	aghmnr		7p. Del. Sedan..	3785	4	4400	beghix	McFARLAN									
4p. Victoria....	1650	23710	aghmnr		7p. Ber Sed. Del.	3885	4	4350	beghix	"Str. 8"									
7p. Sedan.....	1950	43945	aghmnr							131" W.B.									
					LA SALLE					2p. Roadster....	\$3050	2	3400	afghlmprx					
HUPMOBILE					125" W.B.					5p. Touring.....	2650	4	3400	afghlmprx					
"Century 6"					4p. Phaeton....	2295	4	3770	aeghlmprx	7p. Touring.....	2750	4	3450	afghlmprx					
5p. Phaeton.....	\$1425	2900	aghnr		4p. Sp. Phaeton.	2875	4	4170	beghikmnp	4p. Sp. Phaeton.	3180	4	3200	afghlmprx					
2-4p. Sportster..	1435	22820	aghnr							5p. Town Coupe.									

Prices, Weights and Equipment of Current Passenger Car Models

Passengers and Model	F.O.B. Price	Doors	Net Weight	Standard Equipment	Passengers and Model	F.O.B. Price	Doors	Net Weight	Standard Equipment	Passengers and Model	F.O.B. Price	Doors	Net Weight	Standard Equipment	Passengers and Model	F.O.B. Price	Doors	Net Weight	Standard Equipment
4p. Sp. Rdster...	\$1075	2	2730	aeghjn	"8-69"					5p. Tourer...	\$2495	4	3650	cg	131" W.B.				
2-4p. Cabriolet...	1155	2	2825	aghn	126" W.B.	\$2345	3	3905	Deghlmnr	2-4p. Roadster...	2750	2	3540		7p. State Tour...	\$2485	4	4125	Bghjklmnp
5p. 2d. Sedan...	1045	2	2890	aghn	133 1/2" W.B.					2p. Speedster...	2985	2	2875		7p. Sedan...	2085	4	4120	aghlmp
5p. Land. Coupe...	1045	2	2805	aghn	2-4p. Roadster...	2245	2	3710	Deghlmnr	5p. Sedan...	2985	4	3880	cg	4p. Cabriolet...	2250	2	4030	Bghjklmnp
5p. 4d. Sedan...	1145	4	2980	aghn	5p. Sedan...	2345	4	3875	Deghlmnr	7p. Sedan...	3285	4	3980	cg	5p. State Sedan...	2250	4	4250	Bghjklmnp
5p. Land. Sedan...	1265	4	3050	aghn	7p. Sedan...	2545	4	3975	Deghlmnr					7p. State Sedan...	2350	4	4310	Bghjklmnp	
					7p. Limousine...	2645	4	4200	Deghlmnr					7p. Limousine...	2450	4	4395	Bghjklmnp	
OLDSMOBILE										ROLLS ROYCE									
"F-28"					PIERCE-ARROW					"Si. Ghost"					STUTZ "BB"				
5p. Sp. Roadster...	\$995	2	2650	ceghmnr	"81"					Open Models...				Bghjklmnp	"Custom"				
5p. Sp. Touring...	995	2	2640	ceghmnr	2p. Runabout...	\$2600	2	3350	afghlmnr	Closed Models...				Bghjklmnp	131" W.B.				
2p. Coupe...	925	2	2650	aeghmnr	4p. Touring...	2700	4	3365	afghlmnr	"New Phan"				Beghkmpr	2p. Speedster...	\$3495	2	4478	aefghlmnp
5p. Sedan, 2d...	925	2	2785	aeghmnr	7p. Touring...	2850	4	3500	afghlmnr	Closed Models...				Beghkmpr	4p. Speedster...	3595	4	4509	aeghlmp
2-4p. Spt. Coupe...	995	2	2680	ceghmnr	5p. Club Bro'm...	2475	2	3540	afghlmnr						4p. Speedster...	3845	4	4600	aeghlmp
5p. Sedan, 4d...	1025	4	2860	aeghmnr	2p. Coupe metal...	2650	2	3460	afghlmnr						2p. Black Hawk...	4895	2	4302	Beghlmp
5p. Landau Sed...	1085	2	2855	ceghmnr	5p. Brougham...	3250	2	3540	afghlmnr	STEARNES-KNIGHT					4p. Black Hawk...	4945	2	4302	Beghlmp
"Deluxe Seales"					2p. Coupe leath...	2650	2	3490	afghlmnr	"6"					2p. Coupe...	3495	2	4649	aeghlmp
5p. Phaeton...	1145	2	2855	Bjk	5p. Club Sedan...	2750	4	3635	afghlmnr	2-4 Cab. Rdstr...	\$2495	2	3540		4p. Vic. Coupe...	3495	2	4679	aeghlmp
5p. Sp. Roadster...	1145	2	2855	Bjk	2-4p. Coupe met...	2750	2	3530	afghlmnr	5p. C.C. Sedan...	2495	2	3540		5p. Coupe...	3545	2	4769	aeghlmp
5p. Sport Coupe...	1145	2	2855	Bjk	5p. Sedan...	2750	4	3605	afghlmnr	5p. Sedan...	2495	2	3540		5p. Sedan...	3570	4	4977	aeghlmp
5p. Sedan...	1175	4	2855	Bjk	2-4p. Coupe lea...	2750	2	3560	afghlmnr	134" W.B.				5p. Brougham...	3570	4	4820	aeghlmp	
5p. Landau Sed...	1235	2	2855	Bjk	2-4p. Coupe lea...	2750	2	3560	afghlmnr	5p. Coupe...	2645	2	3540		2p. Cab. Coupe...	3695	2	4520	aeghlmp
OVERLAND					2p. Con't Cpe...	2850	2	3455	afghlmnr	7p. Sedan...	2845	2	3540		7p. Speedster...	3895	4	4748	aeghlmp
"4" Whippet					5p. Club Land...	2850	4	3640	afghlmnr	7p. Limousine...	2945	2	3540		7p. Sedan...	3895	4	5018	aeghlmp
5p. Touring...	\$455	4	1985	agr	7p. Sedan...	2850	4	3700	afghlmnr					7p. Sedan Lim...	3995	4	5159	aeghlmp	
2-4p. Roadster...	525	2	1932	agr	4p. Coupe...	2950	2	3490	afghlmnr	"F-6-85"				5p. Collap. Lim...	3995	2	5020	aeghlmp	
2p. Coupe...	535	2	2060	agr	7p. Enc. Dr. Lim...	2950	4	3755	afghlmnr	4p. Roadster...	\$3250	2	4252	aeghlmp	5p. Collap. Lim...	4095	2	5030	aeghlmp
2-4p. Coupe Cab...	595	2	2122	agr	5p. Sedan Land...	3550	4	3605	afghlmnr	4p. Touring...	3250	4	4322	aeghlmp	7p. Collap. Lim...	4195	2	5030	aeghlmp
5p. Coach...	535	2	2160	agr	7p. Sed. Landau...	3700	4	3700	afghlmnr						"Weyman-Cus."				
5p. Sedan...	610	4	2210	agr	5p. Opera Bro'm...	7000	2	3755	afghlmnr						131" W.B.				
"6" Whippet										4p. Cab. Rdstr...	3550	2	4500	aeghlmp	2p. Black Hawk...	4895	2	4302	Beghlmp
2-4p. Roadster...	685	2	2228	agr	2p. Runabout...	5875	2	4560	afghlr	5p. Cus. Sed. Lim...	3700	4	4647	aeghlmp	5p. Sedan...	4120	4	4393	aeghlmp
5p. Touring...	615	4	2228	agr	7p. Touring...	5875	4	4510	afghlr	4p. Coupe...	3450	2	4527	aeghlmp	4p. Sedan...	4120	2	4393	aeghlmp
2-4p. Coupe...	695	2	2356	agr	7p. Sedan...	5875	4	4510	afghlr	5p. Std. Sedan...	3450	4	4572	aeghlmp	4p. Coupe...	4120	2	4393	aeghlmp
5p. Coach...	695	2	2356	agr	7p. Lim. Encl...	5875	4	4510	afghlr	5p. Sedan Lim...	3700	4	4647	aeghlmp	5p. Landau Sed...	4420	4	4393	aeghlmp
5p. Sedan...	770	4	2484	agr	7p. Coupe...	6375	2	4760	afghlr	5p. Cus. Sed. Lim...	3700	4	4637	aeghlmp					
PACKARD					4p. Cpe. Sedan...	6375	2	4795	afghlr	7p. Sedan...	3750	4	4702	aeghlmp	145" W.B.				
"526"					4p. Sedan...	6375	2	4830	afghlr	7p. Sedan Lim...	3950	4	4777	aeghlmp	5p. Sedan...	4495	4	4393	aeghlmp
4p. Runabout...	\$1975	2	3620	Deghlmp	7p. Enc. Dr. Lan...	6000	4	4895	afghlr					5p. Sedan...	4495	4	4393	aeghlmp	
5p. Phaeton...	1975	4	3665	Deghlmp	4p. Lim. Land...	6000	4	4895	afghlr	4p. Roadster...		2	4777	aeghlmp	5p. Sedan...	4495	4	4393	aeghlmp
5p. Sedan...	1985	4	4000	Deghlmp	4p. C. C. Sedan...	6475	2	4745	afghlr	4p. Cabriolet...		2	4777	aeghlmp	5p. Sedan...	4495	4	4393	aeghlmp
2-4p. Coupe...	2050	2	3950	Deghlmp	2p. Coupe...	6800	2	4745	afghlr	2p. Coupe...		2	4777	aeghlmp	7p. Limousine...	4995	4	4778	aeghlmp
4p. Conv't Cpe...	2125	2	3875	Deghlmp	4p. Sedan Land...	6800	4	4795	afghlr	5p. Coupe...	5500	2	4942	aeghlmp	7p. Landau Lim...	5295	4	4778	aeghlmp
5p. Phaeton...	2085	4	3745	Deghlmp	4p. Enc. Dr. Land...	6800	4	4795	afghlr	5p. Sedan...		4	4942	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
4p. Runabout...	2085	2	3700	Deghlmp	7p. Fr. Limou...	7500	4	4740	afghlr						5p. Sedan...	5295	4	4778	aeghlmp
7p. Touring...	2185	4	3865	Deghlmp	7p. Fr. Landau...	8000	4	4985	afghlr	4p. Roadster...		2	4777	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
4p. Coupe...	2385	2	4000	Deghlmp						4p. Cabriolet...		2	4777	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
5p. Club Sedan...	2385	4	4085	Deghlmp	PLYMOUTH					2p. Coupe...		2	4777	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
7p. Sedan...	2385	4	4145	Deghlmp	2-4p. Roadster...	\$675	4	2160	ah	5p. Touring...	5500	4	4872	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
7p. Sedan Lim...	2485	4	4205	Deghlmp	2p. Coupe...	685	2	2295	ah	7p. Sedan...	5600	4	4872	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
"443"					5p. Sedan, 2d...	700	2	2435	ah	7p. Limousine...	5800	4	4872	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
4p. Runabout...	3875	2	4350	Djk	2-4p. Del. Coupe...	735	2	2435	ah	7p. Town Cab...		4	4872	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
4p. Phaeton...	3875	4	4370	Djk	5p. Sedan, 4d...	735	2	2435	ah	4p. Roadster...	3950	2	4448	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
7p. Touring...	3978	4	4410	Deghlmp						4p. Touring...	3950	4	4633	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
2p. Coupe...	4150	2	4350	Djk	PONTIAC "6"					4p. Cabriolet...	4550	2	4717	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
2p. Conv't Cpe...	4250	2	4350	Djk	2-4p. Roadster...	\$745	2	2270	ahn	4p. Coupe...	4550	2	4882	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
4p. Coupe...	4450	2	4435	Djk	5p. Sp. Phaeton...	775	2	2425	ahn	5p. Sedan...	4650	4	4934	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
5p. Club Sedan...	4450	4	4710	Deghlmp	2p. Coupe...	745	2	2435	ahn	7p. Sedan...	4750	4	5027	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
7p. Sedan...	4450	4	4820	Deghlmp	5p. 2d. Sedan...	745	2	2520	ahn	5p. Sedan Lim...	4850	4	5009	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
7p. Sedan Lim...	4550	4	4860	Deghlmp	4p. Sport Cab...	795	2	2455	ahn	7p. Limousine...	5250	4	5102	aeghlmp	5p. Sedan...	5295	4	4778	aeghlmp
"Sed. 8"					5p. Sp. Sedan...	825	4	2595	ahn						5p. Club Phaeton...	3170	4	4393	aeghlmp
7p. Touring...	3540	4	4350	Djk	5p. Sp. Landau...	875	4	2640	ahn	4p. Roadster...		2	4777	aeghlmp	5p. Coupe...	2095	2	3320	aeghlmp
5p. Phaeton...	3540	4	4350	Djk						4p. Cabriolet...		2	4777	aeghlmp	5p. Coupe...	2095	2	3320	aeghlmp
2p. Coupe...	3550	2	4350	Djk	REO					5p. Sedan...		2	4777	aeghlmp	5p. Coupe...	2095	2	3320	aeghlmp
4p. Conv't Coupe...	3550	2	4350	Djk	"Flying Cloud"					5p. Sedan...		2	4777	aeghlmp	5p. Coupe...	2095	2	3320	aeghlmp
4p. Coupe...	3750	2	4350	Djk	2-4p. Roadster...	\$1685	2	3350	aeghlmp						5p. Coupe...	2095	2	3320	aeghlmp
5p. Club Sedan...	3750	4	4350	Djk	5p. Brougham...	1645	2	3335	aeghlmp	STUDEBAKER					5p. Coupe...	2095	2	3320	aeghlmp
7p. Sedan...	3750	4	4350	Djk	2p. Sp. Coupe...	1625	2	3445	aeghlmp	"Dictator"					5p. Coupe...	2095	2	3320	aeghlmp
7p. Sedan Lim...	3850	4	4350	Djk	4p. Victoria...	1795	2	3550	aeghlmp	5p. Touring...	\$1265	4	4350	aeghlmp	5p. Coupe...	2095	2	3320	aeghlmp
PEERLESS					5p. Sedan...	1845	4	3645	aeghlmp	7p. Touring...	1325	4	4350	aeghlmp	5p. Coupe...	2095	2	3320	aeghlmp
"6-60"					5p. DeL. Sedan...	1995	4	3645	aeghlmp	5p. Club Sedan...	1185	2	4350	aeghlmp	5p. Coupe...	2095	2	3320	aeghlmp
2-4p. Roadster...	\$1195	2	2635	ceghlmnr	"Wolverine"					5p. Sedan...	1265	4	4350	aeghlmp	5p. Coupe...	2095	2	3320	aeghlmp
5p. Phaeton...	1195	4	2635	ceghlmnr	4p. Cabriolet...	1195	2	2850	aeghlmp	2p. Bus. Coupe...	1265	2	4350	aeghlmp	5p. Coupe...	2095	2	3320	aeghlmp
2-4p. Coupe...	1295	2	2775	ceghlmnr	5p. Brougham...	1195	2	2930	aeghlmp	4p. Victoria...	1345	2	4350	aeghlmp	5p. Coupe...	2095	2	3320	aeghlmp
5p. Brougham...	1195	4	2850	ceghlmnr	5p. Sedan...	1295	4	3090	aeghlmp	4p. Royal Cab...	1395	2	4350	aeghlmp	5p. Coupe...	2095	2	3320	aeghlmp
5p. Sedan...	1195	2	2780	ceghlmnr						5p. Royal Sedan...	1395	4	3415	Bghlmnr	5p. Coupe...	2095	2	3320	aeghlmp
5p. Sedan...	1295	4	2905	ceghlmnr	ROAMER					"Commander"		</							

This list comprises current cars distributed on a national basis only. Data for previous models back to 1920 will be found in the Chilton Catalog and Directory

MAKE AND MODEL	Wheel Base (Inches)	Tire Size	Model	Number of Cyls.	Rated H.P.	Valve Arrangement	Maximum Horsepower at Specified Speed	Compression Ratio	Crankshaft Drive	Piston Material	No. Main Bear.	Dampers/ Crankshaft Vibration	Oiling System	Oil Cleaner?	Radiator Shutters	Carburetor	Air Cleaner?	ELECTRICAL SYSTEM			Clutch—Type and Make	Gear Set—Type and Make	Universal—Type and Make	REAR AXLE		BRAKES		Steering Gear—Type and Make	Rear Spring—Type and Make	Chassis Lubrication	ABBREVIATIONS—NAMES OF MFRS OF STOCK PARTS
																		Generator and Starter Make	Ignition System	Make				Type and Make	Location and Type	Hand Type	4-Wheel Type				
Auburn	76	28x5 25	Lyc.	WS	6-27x4 1/2	8	185	7	5.05	Ch.	Ala.	4	Y	PG	N	N	N	D-R	D-R	P. Long	War.	m-U-P.	Col.	4.9	E-T	H	Ross.	Bi.	A-Bos—American-Bosch		
Auburn	88	30x6 20	Lyc.	GS	8-34x4 1/2	19	247	7	5.15	Ch.	Ala.	5	Y	PG	N	N	N	D-R	D-R	P. Long	War.	m-U-P.	Col.	4.7	E-T	H	Ross.	Bi.	A-K—Atwater Kent		
Auburn	116	30x6 20	Lyc.	4MD	8-34x4 1/2	33	239	7	5.35	Ch.	Ala.	4	Y	PG	N	N	N	D-R	D-R	P. Long	War.	m-U-P.	Col.	4.9	E-T	H	Ross.	Bi.	A-L—Auto-Lite		
Beck	121 & 129	32x6 50	Own.	6-35x4 1/2	31.5	310	1	91-2800	4.9	He.	NT	8	N	PH	Y	Mar.	N	D-R	D-R	D. Own.	Own.	Own.	Own.	4.9	E-T	M	Ross.	Bi.	Ada—Adams		
Cadillac	341	32x6 75	Own.	6-35x4 1/2	31.5	310	1	91-2800	4.9	He.	NT	8	N	PH	Y	Mar.	N	D-R	D-R	D. Own.	Own.	Own.	Own.	4.9	E-T	M	Ross.	Bi.	Alm—Almetal		
Chandler	85	32x6 50	Own.	6-35x4 1/2	33	341	1	91-2800	4.9	He.	NT	8	N	PH	Y	Mar.	N	D-R	D-R	D. Own.	Own.	Own.	Own.	4.9	E-T	M	Ross.	Bi.	Alm—Almetal		
Chandler	109	32x6 50	Own.	6-35x4 1/2	33	341	1	91-2800	4.9	He.	NT	8	N	PH	Y	Mar.	N	D-R	D-R	D. Own.	Own.	Own.	Own.	4.9	E-T	M	Ross.	Bi.	Alm—Almetal		
Chandler	124	32x6 50	Own.	6-35x4 1/2	33	341	1	91-2800	4.9	He.	NT	8	N	PH	Y	Mar.	N	D-R	D-R	D. Own.	Own.	Own.	Own.	4.9	E-T	M	Ross.	Bi.	Alm—Almetal		
Chandler	128	32x6 50	Own.	6-35x4 1/2	33	341	1	91-2800	4.9	He.	NT	8	N	PH	Y	Mar.	N	D-R	D-R	D. Own.	Own.	Own.	Own.	4.9	E-T	M	Ross.	Bi.	Alm—Almetal		
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Chrysler	134	32x6 50	Own.</																												

for Economical Transportation



Scoring the Year's Greatest Success

*because of Distinctive Beauty, Thrilling
Performance and Amazing Economy!*

Month after month, since the beginning of 1928, Chevrolet dealers have held first place in sales and deliveries in the entire automotive industry—for the automobile they are selling this year has swept America from coast to coast as has no other Chevrolet in Chevrolet history!

Already, over three-quarters of a million new Chevrolets have been delivered into the hands of owners since January 1st! Already, Chevrolet dealers have approached in sales volume the greatest year they have ever enjoyed! And already

the Bigger and Better Chevrolet has definitely established itself as first choice of the nation for 1928!

And small wonder—for here are provided, in generous measure, all those basic qualities that make a motor car easy to sell: marvelous beauty, thrilling performance, delightful comfort, amazing handling ease and impressive low prices!

Naturally, Chevrolet dealers everywhere are listed among the soundest and most progressive merchants in their respective communities.

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

Q U A L I T Y A T L O W C O S T



In One End and Out the Other

If all the cars equipped with Carter carburetors were placed end to end, there would hardly be any end . . . Carter equipment business requires the largest production of carburetors ever reached.

In the wonderfully equipped new Carter plant the output rises to new high levels while quality keeps abreast of production. Material comes in at one end, and finished instruments go out the other. But in between is matchless precision equipment—and an organization in which every third person is directly concerned with inspection—and specially developed equipment for flow-testing each finished carburetor—and the fine laboratory, better than ever, holding its place many jumps ahead.

CARTER CARBURETOR CORPORATION, SAINT LOUIS
Division of American Car and Foundry Company

CARBURETER

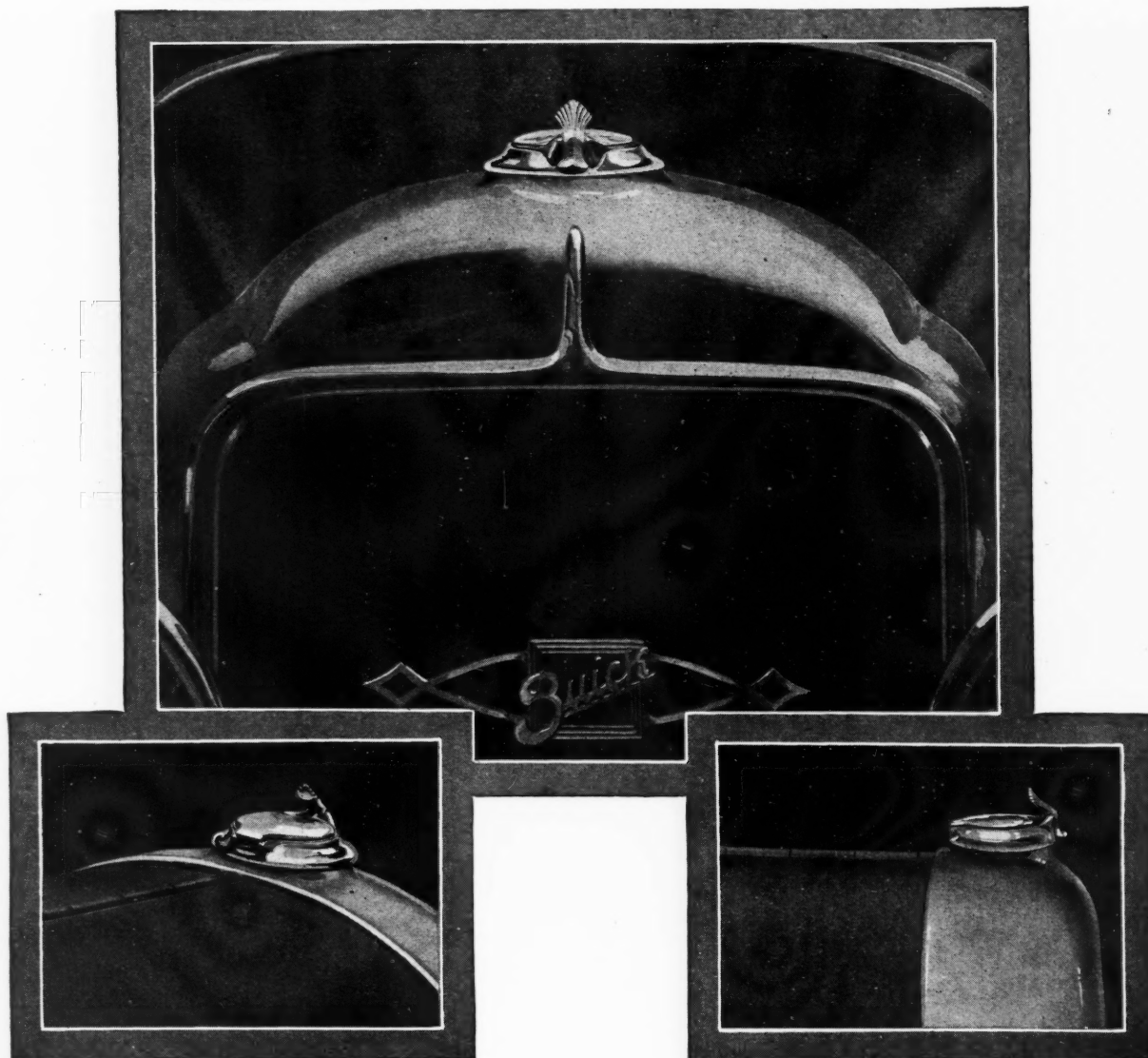
T. M. REG.



MONOGRAM

ORIGINAL

SELF LOCKING RADIATOR CAP



Announcing

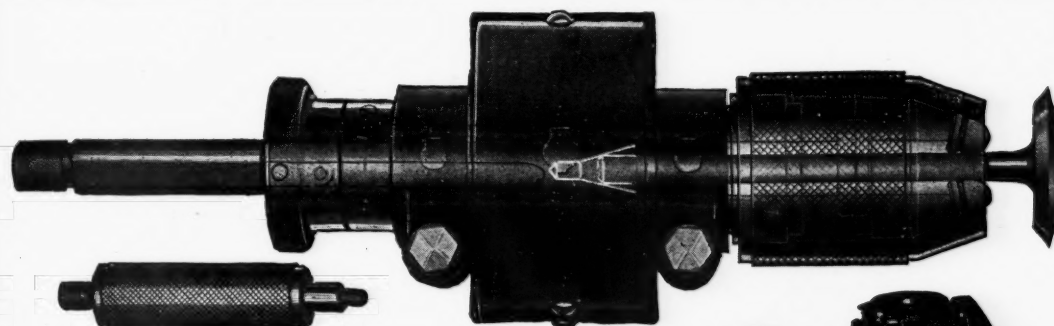
NEW 1929 BUICK-MONOGRAM RADIATOR CAP

THIS beautiful new MONOGRAM Radiator Cap is the result of insistent demand from dealers and jobbers all over the country, for an easy filling, hinged lid radiator cap for the (new) 1929 Buick Car. It is positively the last word in design and is strictly in keeping with the beautiful new Buick. It makes radiator filling easy; something all Monogram caps do, thus insuring at all times proper attention to the car cooling system. This is a chrome plated cap of strictly Monogram quality. If you do not know the name and address of nearest Monogram jobber write us, also ask for additional literature. Get your order in immediately to insure its being filled promptly.

List price, \$4.00.

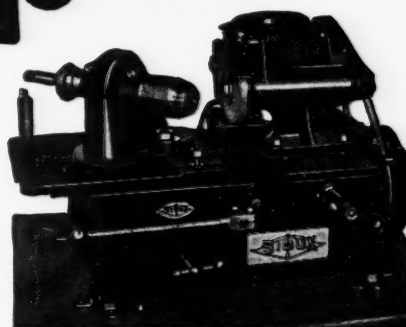
THE KINGSLEY-MILLER CO. :: 625 W. JACKSON BLVD. :: CHICAGO

VALVE FACE GRINDING MACHINE



with the
**Sioux Roller
Chucking System**

Your Jobber Sells It



Men, here's the chuck that's measuring up to the present-day demand for *accuracy with speed* on valve refacing. It's simplicity itself... a new and proved principle.

Look at those roller jaws at the opening ... there are three of them, ... they grip the valve stem firmly, just above the worn surface, —the only proper place for accurate work. When you tighten the chuck, those rollers automatically draw the valve stem back into the aligner. Now notice the aligner with its cone-shaped center. See how it holds the valve stem *perfectly centered*. That means the valve face will be ground in true relation to the entire length of the stem. It is adjustable to different length stems. Even the new Ford valve, with its mushroom end, is a cinch for this chuck to handle.

Only in the Sioux Valve Face Grinding Machine can you get this Sioux Roller Chuck and other exclusive Sioux features. Look into the Sioux before you buy.

Albertson & Co. Sioux City, Ia., U.S.A.



MOTOR AGE

The Most Elastic Automotive Retail Publication

Whatever your objective, *Motor Age* will fit your needs.

It is published 52 times a year. You may select the issues you most want to use—or you may use them all.

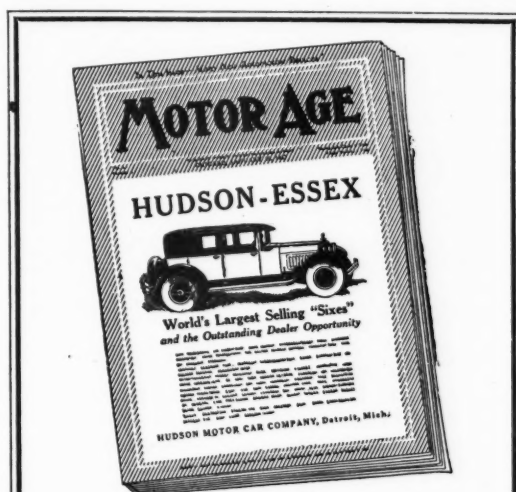
Its advertising space varies for your convenience from 1/16 of a page to as many full pages as your requirements need in any one issue—in one or two colors, as you prefer.

Its advertising rates are correspondingly accommodating. If your advertising appropriation amounts to \$16 or more, there is a *Motor Age* schedule to fit it.

Whatever your objective, *Motor Age* will meet your requirements—and if there is a need for your product in the automotive field, *Motor Age* will sell it.



Weekly Readers Are Weekly Buyers



The busiest dealers within the automotive industry are the readers of *Motor Age*.

It keeps them up on their toes—alert, resourceful and in position to recognize success when it comes their way.

FLEXO
Trade Mark Reg.
**COMBINATION
PISTON RINGS**

Guaranteed
Two combination rings of special design with Expanders of finest Swedish steel. Guaranteed to seal cylinder and centralize pistons, eliminating oil pumping, piston slap and compression loss when properly installed. Write for details.
The Wel-Ever Piston Ring Co., Toledo, Ohio

STANDITALL
AUTO RADIATOR

You can make more money by replacements than repairs. "Standitall" cores will not burst from boiling or force from freezing. Will outlast the life of the car. Liberal offer for the wide-awake dealer. Investigate now.
J. C. BLACK MFG. COMPANY, INC.
OIL CITY, PA.

NEXT WEEK
—is the time to read next week's issue of *MOTOR AGE*, as you are reading this week's issue this week
MOTOR AGE
Chestnut and 56th Sts. Philadelphia, Pa.

A Bulwark of Protection  A Beacon for the Highway
BRIGHT BUMPERS
Better to Own THE WARREN TOOL & FORGE COMPANY Better to Sell
500 GRISWOLD ST. WARREN, OHIO, U. S. A.

Have You a Seasonable Product to Market?

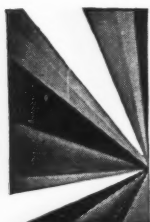
Time flies—and seasons go with it. In a month you can tell your seasonable advertising story in *Motor Age* four or five times.

In two months, eight or nine times. In three months, twelve or thirteen times.

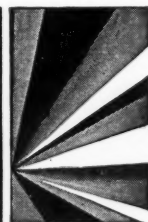
And your seasonable sales will be in proportion to the number of times you tell your advertising story *in season*.



Weekly Readers Are Weekly Buyers



With the World to choose from
they chose
HOUDAILLE
Hydraulic Double-Acting
SHOCK ABSORBERS
for the ride
HOUE ENGINEERING CORP., Buffalo, N.Y.



NEW! **MOBILATOR** NEW!
Automatic Starter Control
THE GREATEST AUTO DEVELOPMENT IN RECENT YEARS—
just push in the clutch to start your motor. Write for
particulars. **Distributors wanted.**
MOBILATOR CORP., 2816-333 N. Michigan Ave., Chicago

*"If my Franklin Compressor ever
does wear out, I'll buy another"*
Franklin
AIR COMPRESSOR CORPORATION
Norristown, Pennsylvania

R & R SUPER POWER CYLINDER HEADS

For Chevrolets and Racing Equipment

R & R MANUFACTURING CO.
CABLE ADDRESS RCO ANDERSON, INDIANA

THE **DURANT** LINE
IS A BRILLIANT SUCCESS
DURANT MOTORS, Inc.
250 West 57th St., New York, N. Y.
Factories: Elizabeth, N. J.—Lansing, Mich.—Oakland, Cal.—Toronto, Canada

LANDIS Shock Diffusers

Now Ready for
FRANKLIN, PACKARD, MARMON
CHRYSLER IMP. 80, HUPMOBILE CEN. 8
LANDIS ENG. & MFG. CO.
AUTOMOTIVE DIV. WAYNESBORO, PENNA.

This sign adds
SALES
to your
SERVICE
J. WARREN WATSON CO.
Phila. Pa.
WATSON
STABILATORS
Official Sales and Service

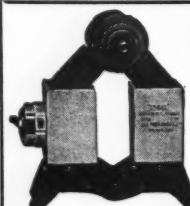
NEW PRICES!

A new Dealers Net Exchange Price
List for Fredericks Lyknu Rewinds is
now ready. Free, together with The
Fredericks Armature Application List
—complete data on every armature
since 1920. The Fredericks jobber
displays this sign.

H. M. FREDERICKS CO.
LOCK HAVEN PENNA.

AUTHORIZED ARMATURE


Rewinds
LYKNU
by **FREDERICKS**
EXCHANGE SERVICE



IDEAL ADJUSTABLE PORTABLE GROWLER
A hinged device to test all armatures from
3/4" to 10" diam. Ideal Adjustable Growlers
make the proper span eliminating core or slot
shorts. Guaranteed satisfactory or money
refunded. Get prices and sales offer.
J. J. ANKENBRANDT
2140 WAKEMAN ST. TOLEDO, O.



BUDD
WHEEL COMPANY
Detroit

A waving red light is the universal danger
signal. Here is a positive warning stop
light, with positive profits. Write today
for complete information.
The
ILER ELECTRICAL MFG. CO.
5103 Lakeside Avenue, Cleveland, Ohio

Pines Automatic Winterfront

For complete selling information write
your nearest distributor or direct to
PINES WINTERFRONT CO., 422 N. Sacramento Blvd., Chicago, Ill.

The Hand Operated Brake Tester!
License Pat. No. 1264770
Other Pats. Pending
The patented Linendoll Auto Brake
Tester gives all information necessary
for equalizing brakes on any car or
light truck! \$37.50 complete. Write us!
THE NORWALK AUTO PARTS
COMPANY
Norwalk, Ohio
Gen. Sales Office
Real Estate Trust Bldg.
Philadelphia, Pa.



Pedal Depressor
No. 6 Locking Type

Weidenhoff
SHOP EQUIPMENT for
BATTERY and ELECTRICAL SERVICE
Test Benches • Rectifiers • Constant Potential Battery Chargers • Lathes
Battery Testers • Mica Undercutters • Growlers
4358 Roosevelt Road Chicago, Illinois

CLASSIFIED ADVERTISEMENTS AND BUSINESS OPPORTUNITIES

SALES EXECUTIVE—Acquainted with Whole-sale automotive field, wanted by leading manufacturer about 200 miles from New York. Proposition will interest executive of highest calibre, accustomed to large earnings. Give experience in confidence. Our own organization knows of this advertisement. Box 6324, MOTOR AGE.

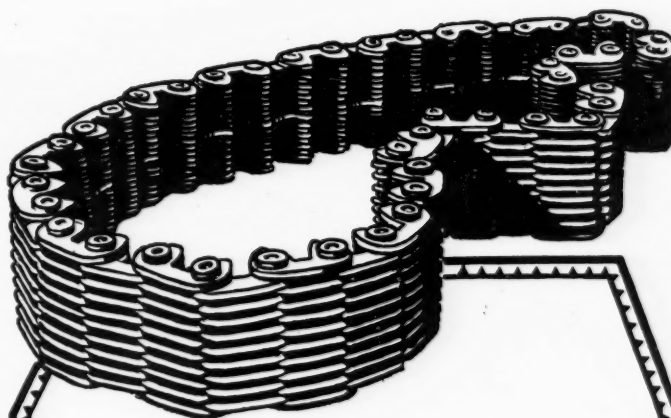
FOR RENT—Public garage, containing about 12,000 sq. ft., on Main St., Middletown, Conn. Suitable for agency, storage and repair work. Inquire Guardian Realty Co., 750 Main Street, Hartford, Conn.

CLASSIFIED ADVERTISEMENTS
IN "MOTOR AGE" ALWAYS BRING
RESULTS.

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The Advertisers' Index is published as a convenience, and not as a part of the Advertising contract. Every care will be taken to index correctly. No allowance will be made for errors or failure to insert.

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Few if Any

repair jobs bring such satisfaction to the customer as restored *perfect timing*. The effect of replacing the worn and noisy timing chain with a "WHITNEY" is felt the instant he takes the wheel and "steps on it."

Few if any jobs, too, are as profitable to the repairman as replacements with quiet "WHITNEY" CHAINS. They are simple in construction, easy to install, and carry a good margin of profit.

And there are *few if any* "come-backs." The job is right the first time.

*Ask your jobber or
write us*

WHITNEY

SILENT TIMING

CHAINS

THE WHITNEY MFG. CO.
Hartford, Connecticut



Manufacturers' Auto Equipment Co.
995 E. Green St., Pasadena, Cal.

Send me by return mail, free of obligation,
your new circular MA-8 on Tru-DruM
Assembly No. 1, for passenger car and
truck brake work, with prices and illus-
trated description.

Name

Address

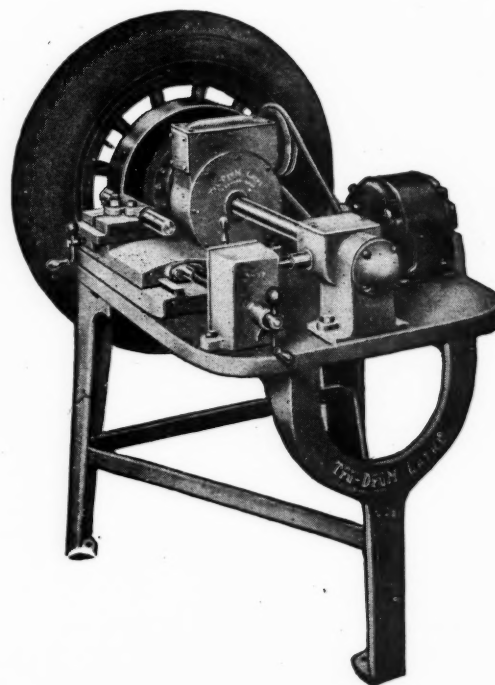
City

Jobber

**CUT THIS OUT AND
MAIL IT TO-DAY!**

The above coupon is important to you if you operate a brake shop. Get the new Tru-DruM story of bigger profits. The sensational profit-building performance of Tru-DruM Assembly No. 1 in hundreds of brake shops, big and small, from coast to coast, eliminates all risk in Tru-DruM ownership. Simply mail the coupon. Get the whole convincing story by return mail.

MANUFACTURERS' AUTO
EQUIPMENT COMPANY
995 East Green St. Pasadena, Cal.



TRADE MARK

REG. U. S. PAT. OFF.

Tru-DruM

AUTOMATIC BRAKE DRUM LATHE

Six Years on 2300 Trucks

Allbestos Brake Lining

MEANS SERVICE

Efficient & Dependable

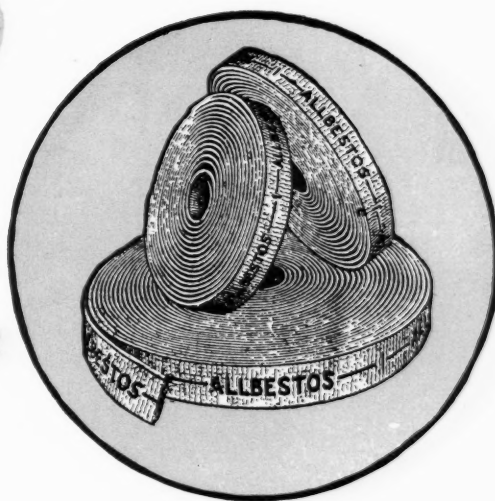
Allbestos gives the confidence that every driver using it delights in. A Superior Brake Lining that is always Efficient and Dependable in either wet or dry weather.

The Gulf Refining Co. has been using Allbestos Brake Lining 100% for past six years on their fleet of 2300 trucks servicing fifteen states, because they find it Efficient and Dependable.

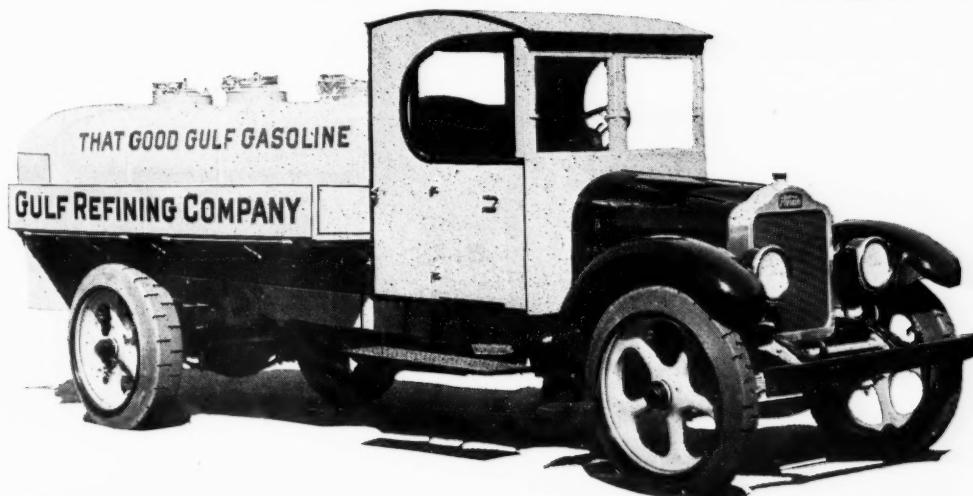
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ALLBESTOS CORPORATION

Germantown Philadelphia, Pa.



For Pleasure Car,
Truck and Bus



GULF TRUCKS ARE ALLBESTOS LINED



CHRYSLER

*Never More Popular,
Offers YOU a Great Chance*

THERE never has been anything in Chrysler history to approach the enthusiastic reception given to the new Chryslers — "75" and "65." Chrysler has ten times as many orders on hand now as at this time last year, and that was the record to that date.

It is obvious that the popularity won by the new style that re-styles all motor cars and the greater value, even when compared with cars costing many hundreds of dollars more, indicates a huge volume of business for those who are fortunate enough to be Chrysler dealers.

You may have the opportunity to ally yourself with the never-more-popular Chrysler. You owe it to yourself to find out. Your communication will be held in strictest confidence.

CHRYSLER SALES CORPORATION, DETROIT, MICHIGAN
CHRYSLER CORPORATION OF CANADA, LIMITED, WINDSOR, ONTARIO

